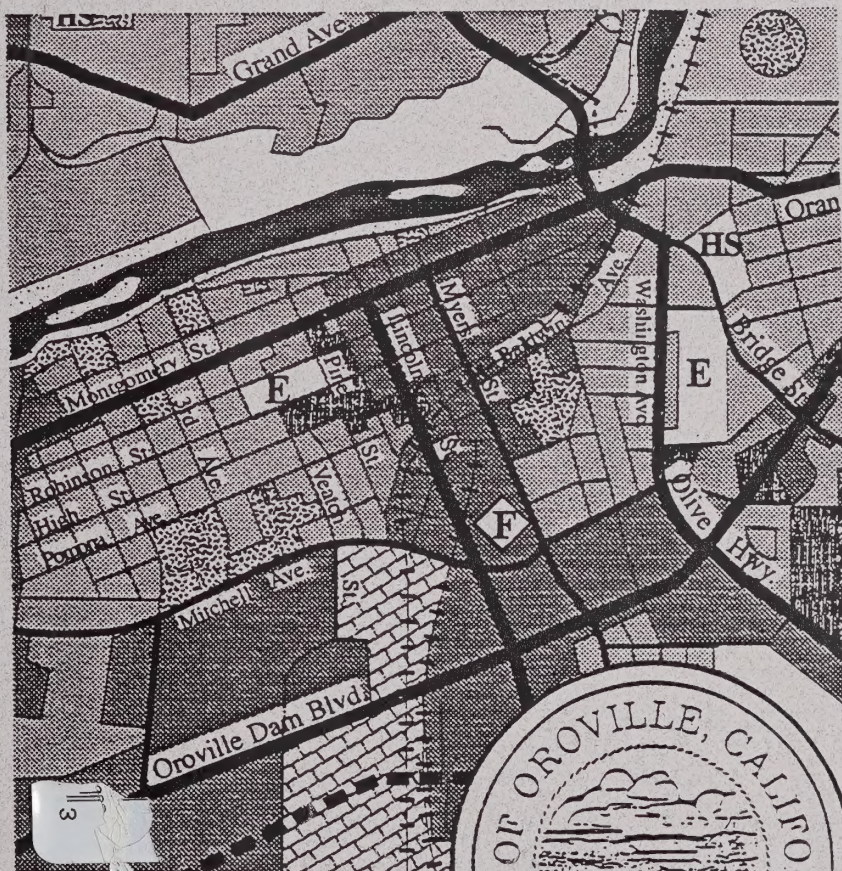


CITY OF OROVILLE GENERAL PLAN

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Adopted
October 3, 1995

CITY OF OROVILLE GENERAL PLAN

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October 3, 1995

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This document is dedicated to the following groups and individuals in appreciation of their efforts which have been instrumental to the successful completion of the City of Oroville's General Plan Update:

The Oroville Industrial Development Corporation (OIDCO)
The Oroville Chamber of Commerce
The Oroville Downtown Business Association
The Oroville Board of Realtors
Members of the Business Community
Residents

Past and current
City Council Members,
Planning Commissioners
and Staff

TABLE OF CONTENTS

1	Overview	1-1
1.10	User's Guide to the Oroville General Plan	1-1
1.20	The City of Oroville	1-4
1.30	Themes of the General Plan	1-5
1.40	Need for General Plan Revision	1-6
1.50	Public Participation in the Plan	
	Revision Process	1-7
1.60	Requirements and Scope of the General Plan	1-8
1.70	Vertical Consistency — Relationship to Other City Regulations, Policies Programs	1-10
1.80	Planning Area/Planning Sectors	1-11
1.90	Major City, County, Special Districts and State Programs	1-12
2	Growth Management Program (<i>Reserved</i>)	
3	Land Use Element	3-1
3.10	Land Use Classifications	3-2
3.20	Additional Development and Population Holding Capacity	3-7
3.30	Residential Areas	3-9
3.40	Retail and Office Areas	3-11
3.41	Downtown	3-12
3.42	Oroville Dam Boulevard	3-13
3.43	Visitor Services	3-15
3.44	Neighborhood Shopping	3-16
3.45	Highway Frontage	3-17
3.46	Offices	3-18
3.50	Industrial Area	3-20
3.60	Target Annexation Areas	3-22
4	City Design Element	4-1
5	Circulation Element	5-1
5.10	Service and Improvement Standards	5-2
5.20	Street Classification and Network	5-10
5.30	Transit and Transportation Systems Management	5-18
5.40	Bicycle System	5-21
5.50	Oroville Municipal Airport	5-25

6	Open Space, Natural Resources, and Conservation Element	6-1
6.10	Open Space for the Preservation of Natural Resources	6-3
6.11	Biotic Resources	6-3
6.12	Water Quality	6-21
6.13	Energy Resources and Conservation	6-25
6.14	Waste Management and Recycling	6-28
6.15	Archaeologic, Historic, and Paleontologic Resources	6-32
6.16	Air Quality	6-37
6.20	Open Space for the Managed Production of Resources	6-41
6.21	Agriculture	6-41
6.22	Mineral Resources	6-45
7	Public Facilities and Services Element	7-1
7.10	Parks, Recreation, and Open Space	7-2
7.11	Trails	7-18
7.20	Schools	7-22
7.30	Water Supply, Wastewater Collection, and Treatment	7-29
7.31	Water Supply	7-30
7.32	Wastewater Collection and Treatment	7-32
8	Safety Element	8-1
8.10	Geology, Seismicity, and Soils	8-2
8.20	Drainage and Flooding	8-6
8.30	Fire Hazards	8-14
8.40	Hazardous Materials	8-18
8.50	Electromagnetic Fields	8-20
8.60	Emergency Management	8-21
9	Noise Element	9-1

APPENDIX: Glossary of Terms and Abbreviations

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LIST OF FIGURES

	Follows Page
GP Figure 1.80-A Boundaries	1-11
GP Figure 1.80-B Planning Sectors	1-11
GP Figure 1.90-A Special Districts	1-12
GP Figure 3.60-A Target Annexation Areas	3-23
GP Figure 5.20-A Street Network	5-10
GP Figure 5.40-A Bikeways and Trails	5-22
GP Figure 6.11-A Biotic Resources	6-5
GP Figure 6.11-B Wetlands	6-5
GP Figure 7.10-A Parks and Open Space	7-5
GP Figure 7.20-A Schools and School Districts	7-23
GP Figure 8-A Environmental Hazards	8-3
GP Figure 8.10-A Geologic Hazards	8-3
GP Figure 8.60-A Evacuation Routes	8-21

LIST OF FIGURES

GP Figure 9-A Existing Noise	9-3
GP Figure 9-B Future Noise	9-3
GP Figure 9-C Existing Airport Noise Contours (1989)	9-30
GP Figure 9-D Projected Airport Noise Contours (2010)	9-30
GP Figure 9-E Feasibility of Developments with Respect to Noise	9-36
General Plan Diagram	In Back Cover Pocket

1.0 OVERVIEW

1.10 USER'S GUIDE TO THE OROVILLE GENERAL PLAN

PLAN ORGANIZATION

General Plan Text. The Oroville General Plan integrates each of the seven elements required by State law to be included in a general plan and several optional elements into nine separate sections. Table 1.10-A outlines how each these elements are organized, the major issues addressed within each element, and how the elements relate to each other.

Within each element the text is further organized into separate topic sections with background information provided first, followed by objectives, implementing policies, and narratives.

Objectives are included within every element and are the City's adopted statements of goals and philosophy. They are broad in nature and are intended to be the framework within which the City will make future decisions related to the community. Individuals interested in the City's adopted goals regarding Oroville's future growth should refer to these objectives for guidance in designing future public and private development projects.

Following the objectives section of each element are *implementing policies* which represent the City's adopted commitments to consistent actions which are intended to implement the community's broader objectives. The implementing policies are as specific as is appropriate given the City's current level of knowledge and consensus on each issue. Together, the *objectives* and *implementing policies* are meant to set-forth the City's vision of its future.

Brief *narratives* are included after particular objectives and implementing policies to share insights as to how the adopted statements can be interpreted. These *narratives* are not adopted City policies.

The glossary, located at the rear of this document, defines technical terms.

Formatting. For ease of identification, adopted objectives and implementing policies are printed in roman type, whereas descriptive narratives appear in italic.

**TABLE 1.10-A
ORGANIZATION OF THE GENERAL PLAN**

OROVILLE GENERAL PLAN SECTION	STATE- MANDATED?	MAJOR ISSUES ADDRESSED	CLOSELY RELATED ELEMENTS
Overview	No	Themes of the Plan, using the Plan, planning area and planning sectors.	
Land Use Element	Yes	Land use classifications, sets densities and intensities for development, creates a pattern of land use and conservation illustrated by the General Plan diagram.	All
City Design Element	No	Visual design at the citywide scale.	Land Use, Housing
Circulation Element	Yes	Freeways, arterial and collector streets, trails, bikeways, transit, railroads, Oroville Airport and utility corridors.	Land Use, Public Facilities and Services
Open Space, Natural Resources and Conservation Element	Combines State-mandated Open Space and Conservation elements	Management of different categories of open space lands as well as policies for conservation of natural and cultural resources.	Land Use, Public Facilities and Services (includes park and recreation section)
Public Facilities and Services Element	Yes	Parks and recreation areas, schools, water supply and wastewater collection and treatment.	Land Use, Circulation
Safety Element	Yes	Protection from geologic, seismic and soils hazards, drainage and flooding, urban and wild fire hazards, hazardous materials, electromagnetic fields, and emergency management.	Open Space, Natural Resources and Conservation
Noise Element	Yes	Noise and mitigation of noise from all sources.	Circulation, Land Use

General Plan Diagram. The General Plan Diagram, located in the pocket at the rear of this volume, depicts the desired ultimate land use and traffic network and distinguishes between existing or proposed street alignments. The Diagram must be used in conjunction with the Plan text in order to gain a full understanding of the City's existing community, adopted objectives and policies, and vision of the future. The Land Use Classifications discussed in Section 3.10 explain the General Plan Diagram land use legend, and specify allowable density and intensity ranges for each land use category.

Where land is subdivided and largely built-up, the Diagram's land use designations generally follow parcel boundaries or natural features. Circles indicate proposed parks, schools, shopping centers, and other facilities. Circles are used to indicate approximate locations; more than one site in the vicinity of any one of these symbols may be appropriate and could be approved without amending the General Plan. Places of religious assembly are not shown.

Developed Areas. In addition to illustrating future land uses for areas that are undeveloped as of 1995, General Plan land use designations are applied to built-up areas that have been developed over time under changing regulations with a variety of densities and intensities. It is not the intent of the General Plan to create large numbers of nonconforming uses or structures, but the complexity of the land use pattern in some parts of the City makes it impossible for the General Plan Diagram to accurately reflect every pre-existing use, nor is it desirable to reflect them all at the General Plan level. Therefore, zoning regulations should not designate as nonconforming each use or structure that does not fall within the density or intensity standard of the General Plan use category. Areas designated Medium Density Residential, for example, do not exceed an average of six units per gross acre, but zoning in a portion of the area may permit housing types other than single-family detached units, and allow continuation of pre-existing residential development as conforming structures.

Limitation on Development. Text policies may limit the density or intensity of development on a particular site in ways not apparent from the General Plan Diagram. For example, Plan policies protecting natural habitat or preserving steep slopes may prevent designated maximum density or intensity from being reached on some parcels. Regardless, the City has no obligation to approve projects at the maximum General Plan density or intensity. Residential density ranges are intended to bracket several zoning districts to be mapped at different locations within a General Plan classification.

Commercial and industrial intensity standards in the General Plan Land Use Classifications section represent maximum averages that form a basis for determining traffic capacity and utility service requirements.

AMENDMENTS TO THE GENERAL PLAN

From time to time, changes in policy as well as unforeseen opportunities or needs will require amendment of the General Plan. In an effort to prevent casual or automatic General Plan

amendments, State law allows each mandatory element to be amended not more than four times per year, although there is no limit to the number of changes made during each amendment. Most requests are likely to be for map changes, but each must be screened for consistency with text policies. General Plan amendments are defined as projects under the California Environmental Quality Act (CEQA), and therefore will be subject to environmental review requirements.

The entire Plan should be reviewed and updated at least every five to seven years. During the first year following adoption of the General Plan, amendments will be discouraged in order to allow the City time to implement the General Plan and assess any impacts which may occur.

1.20 THE CITY OF OROVILLE

As the seat of Butte County, birthplace of the gold dredge, and site of the largest reservoir of the State Water Project, Oroville is a city of 12,000 residents located within a larger Planning Area consisting of an estimated 33,531 residents. Diverse economic activities have historically shaped the City and include:

Gold Mining. John Bidwell discovered gold on the Feather River in 1848, and by 1856 Oroville was the seat of Butte County and the largest mining camp in the State. Gold dredging originated at Oroville, after hydraulic mining was banned near the turn of the century and continued until World War II, making Oroville California's fourth most productive dredge site. Several square miles of tailings along the river attest to the scale of this industry.

Agriculture. Oranges and olives have been grown in the Planning Area's remarkable thermal belt for 100 years.

Railroading. With completion of the Western Pacific Railroad in 1910, Oroville became the point at which engines were added for the push over the lowest-elevation rail crossing of the Sierra. Mainline service made it an ideal shipping point for lumber and agricultural products.

Lumber Processing. Situated at the base of a vast timbershed, Oroville has been a lumber processing center during most of its existence. The large mills and wood specialties manufacturers that were major contributors to Oroville's growth during the homebuilding boom following World War II have been vulnerable in recent years due to declines in lumber demand or supply.

Dam Construction and Operation. Oroville Dam is the centerpiece of the California Water Project and was the world's largest earthfill dam when it was completed in 1968. Construction was preceded by more than a decade of debate regarding financing and which communities would receive the water. The dam resulted in the new waterways and highways that surround the Old City. Lake fishing

and boating attract 600,000 visitors annually, but this is fewer than projected because facilities have never been fully developed or adequately marketed.

Recreation. The City is situated within a region rich with both natural and human made recreational activities. Areas such as Lake Oroville, the Oroville Wildlife Refuge, and the Thermalito Forebays and Afterbay offer numerous recreational opportunities including boating, fishing, camping, hiking and biking.

1.30 THEMES OF THE GENERAL PLAN

The General Plan is a statement of Oroville's vision of its long-term future, focusing on the physical components that comprise the City. Housing, conservation, recreation, industry, and circulation are some of the major topics addressed. The Plan consists of background text, objectives, policies and figures that elaborate six broad themes reflecting the City's priorities for the coming decades.

Growth. Employment in resource-based industries, historically and presently the basis of Oroville's economy, is expected to stabilize or decline during the period of General Plan buildout. New industries and a higher population growth rate are needed to improve the City's economy. Programs not directly related to the General Plan, such as the 1991 designation of an Enterprise Zone, and the City's industrial recruiting efforts, contribute to fostering continued growth. The General Plan does the same by identifying land for local- and region-serving offices, new shopping centers, highway services centers, and diverse types of industries. The Plan also calls for high standards to be established for activities in the Airport Business Park so that its quality will compete with sites in Sacramento and other Central Valley cities. Areas designated for housing by the General Plan will accommodate about 80,277 Planning Area residents, more than twice as many as were counted by the 1990 census.

Environmental Awareness and Conservation. Policies included in the General Plan's Open Space, Natural Resources and Conservation Element reflect a more active approach to environmental conservation than previously taken by the City. The Planning Area's natural resources help make it an appealing place to live, work and play. Conservation of oak woodlands, wetlands, and riparian corridors will enhance the quality of life in Oroville relative to metropolitan areas where such resources have been destroyed. General Plan policies call for a relatively high level of ongoing management and planning for the City's natural and cultural resources.

Quality Development. The General Plan's message is that Oroville will not accept low standards which will compromise the City's ability to attract quality growth over the planning period. Key policies in achieving quality development are included in the Land Use and City Design Elements. These include establishing design guidelines to be used in the City's Development Review process, limiting freeway-oriented advertising signs, improving Oroville Dam Boulevard to make it a tree-lined community

spine stretching from Larkin Road to Olive Highway, and creating a desirable environment for locating residences on the north side of the Feather River near Downtown.

Housing Diversity. Oroville offers residents a broad selection of residential settings, densities, housing types and prices. The Land Use Element establishes four residential land use classifications: Very Low Density, Low Density, Medium Density, and High Density. The Plan is designed to avoid the monotony that characterizes many metropolitan suburbs by calling for a mix of densities and housing types in all parts of the Planning Area; by development at intensities that can be supported by infrastructure; and by making provisions for new neighborhoods in unique locations.

Sense of History. As Oroville grows, it is important that the community's sense of history be maintained and included in future development plans. The General Plan reaffirms a longstanding commitment to historic preservation by continuing to preserve and enhance Downtown and encourages the preservation of various elements within the Planning Area's historic landscape, such as woodlands and fruit groves.

Governmental Cooperation and Consolidation. In order to decrease the amount of confusion and inefficiency amongst the numerous agencies with overlapping responsibilities and interests in the Planning Area, an atmosphere of mutual trust and an agreement on a shared course of action is needed. The General Plan, prepared with input from all the major agencies and with representation from all sectors of the Planning Area, is intended to provide such a framework.

1.40 NEED FOR GENERAL PLAN REVISION

Throughout the City's history, numerous General Plan elements have been prepared and adopted. These elements, and their adoption dates, include the following:

- Land Use Element, 1983
- Circulation Element, 1983
- Noise Element, 1983
- Housing Element, 1993
- Economic Development Element, 1983
- Open Space/Conservation Element, 1973
- Scenic Route Element, 1973
- Seismic Safety Element, 1978
- Community Facilities Element, 1973
- Safety Element, 1973

Due to the length of time which has elapsed since each of these elements were adopted,

the City began a complete revision of the current General Plan in 1990. A major focus of the General Plan revision was to strengthen the Plan's ability to serve as a guide for the design of public and private development projects. The intent of the update was to eliminate any obsolete elements, ensure legal conformity with State planning laws, revise elements to include current community data and desires, and to adequately plan for future growth and the needs of the community. The revised Plan was prepared in concert with a Butte County Association of Governments (BCAG) traffic model and coordinates residential densities with traffic capacity and the feasibility of extending sewers to areas not presently served.

At the completion of the Plan revision, all elements were combined into one document, with the exception of the Housing Element. The Housing Element will remain as a separate, but interdependent, element of the General Plan. Upon adoption of the Plan, the Housing Element and Zoning Ordinance were revised to ensure consistency with the new General Plan.

1.50. PUBLIC PARTICIPATION IN THE PLAN REVISION PROCESS

In August 1990, the City of Oroville contracted with Blayney, Dyett and Greenberg to prepare the City's Updated General Plan. A steering committee was formed consisting of approximately twenty individuals including residents within the city limits and the unincorporated portions of the Planning Area, two City Council Members, two Planning Commissioners, local business owners and professionals, and school district and utility company officials. This committee worked with City Staff and the General Plan consultant to formulate a Draft General Plan.

The Draft General Plan was submitted for public review in November 1992. City Staff and the Planning Commission conducted four informational meetings at various locations throughout the Planning Area during November and December 1992. The purpose of these meetings was to draw the public's attention to the General Plan update project and encourage as much public review and comment as possible.

The public review period for the Draft Environmental Impact Report (EIR) was noticed and began on December 28, 1992. The initial public review period for the Draft EIR was set for 75 days. The extra 30 days given beyond the legal minimum of 45 days was due to City Staff and Planning Commission interest in providing members of the public with ample time to review and comment on both the Draft EIR and the Draft General Plan. Due to length of the Draft EIR, the City received several requests for an extension of the review period. In response to those requests, the City ultimately provided a 136 day public review period for the Draft EIR.

Beginning in February 1993, City Staff also began working with another citizens committee formed by representatives of local organizations such as the Oroville Industrial Development Corporation (OIDCO), the Chamber of Commerce, the Downtown Business Association and the Oroville Board of Realtors. Staff's role was to assist the committee with its review of the Draft General Plan and Draft EIR, and to encourage the submittal of the group's specific comments and suggestions. Staff attended over a dozen meetings with this committee and extremely detailed comments were submitted regarding all elements of the Draft General Plan. The amount of time the representatives of this committee put into the formulation of their comments was tremendous and clearly demonstrated the commitment of these organizations to the community.

Due to a 50% reduction in Planning Department Staff which occurred in 1992, the City Council entered into a contract with Willdan Associates in June 1993 to assist City Staff with the processing of this project.

In the fall of 1993, the Planning Commission and Staff conducted workshops to review the written comments the City received pertaining to the Draft General Plan. During these workshops, the Commission recommended that several of the policies and objectives within the Draft General Plan be heavily modified or deleted and directed Staff to review such changes in relation to CEQA and State planning laws.

After reviewing these modifications, public hearings were again held to seek the Planning Commission's recommendations regarding each comment. During the public hearings, the Commission accepted additional verbal input from interested individuals. The Planning Commission's recommendations, and the additional verbal and written comments which were received, were ultimately forwarded to the City Council for their consideration.

The City Council held additional public hearings in 1994. Their recommendations and pertinent community comments were integrated into the 1992 Draft General Plan to create this document. In early 1995, the Draft General Plan and Draft EIR were released for public review. Public comments were later incorporated into the Draft General Plan and the Final EIR. Five years of community input and revisions resulted in this document which was adopted by the Oroville City Council in October 1995.

1.60 REQUIREMENTS AND SCOPE OF THE GENERAL PLAN

A city's general plan has been described as its development constitution — the set of policies within which development regulations and decisions must fit. The general plan is a statement of the community's vision of its long-term or ultimate physical form.

The State of California's general plan law is a product of the incremental nature of the legislative process. The State mandates that each city and county have a general plan that incorporates seven elements: land use, circulation, housing, open space, conservation, safety, and noise. Government Code 65301(a) allows a city to organize the elements, in any manner chosen, as long as all topics are covered.

All elements, whether mandated or optional, have equal legal status. The General Plan must be internally consistent, with no one element or section having precedence over another.

The Plan must be:

- **Long-range:** In order to avoid incremental planning decisions which may occur over many years and may eventually conflict with each other, the General Plan is intended to be long-range. It considers issues which may impact the community throughout the next two decades.
- **Comprehensive:** The Plan must coordinate all major components of the community's development, covering the entire incorporated area of the City, as well as any other land which bears relation to the City's planning. In addition, the Plan must address the full range of issues associated with the City's physical development.
- **General:** Because it is long-range and comprehensive, the Plan must also be general. The Plan's purpose is to serve as a broad framework for detailed public and private development proposals.
- **Internally Consistent:** All parts of the Plan (text, diagrams and figures in all elements) must be fully integrated and not conflict with each other.

The Oroville General Plan is not simply a compendium of ideas, data and wishes. The Plan is a tool that assists decision makers well into the future in formulating and implementing community decisions. It consists of a Diagram (a drawing that shows the physical arrangement of the community and the relationships amongst land uses, facilities and resources), formal objectives and implementing policies, and descriptive narratives. The Plan has four main purposes:

1. To enable the Planning Commission and City Council to reach agreement on long-range development policies;
2. To provide a basis for judging whether specific private development proposals and public projects are in harmony with City policies;

3. To allow other public agencies and private developers to design projects that are consistent with City policies, or to seek changes in those policies through the process of amending the General Plan; and
4. Provide an agreement among different agencies for development in the unincorporated part of the Planning Area.

1.70 VERTICAL CONSISTENCY – RELATIONSHIP TO OTHER CITY REGULATIONS, POLICIES AND PROGRAMS

The General Plan provides the basis for all of the City's regulations, policies and programs that relate to issues addressed in the Plan. In addition to requiring that the Plan be internally consistent, the State requires what is sometimes called vertical consistency — i.e., consistency between the General Plan and other City actions. This requirement means that the City's zoning and subdivision ordinances, specific plans and redevelopment plans must all be consistent with the General Plan. In addition, all development approvals, public works projects and open space implementation programs have to be consistent with the General Plan.

The State's *General Plan Guidelines* provide the following rule for defining consistency: "An action, program or project is consistent with the general plan if, considering all its aspects, it will further the objectives and policies of the general plan and not obstruct their attainment.¹" This rule clarifies that consistency does not require all subsequent City actions to be specifically anticipated by the General Plan. Because the Plan is both broad and long-range, there are many circumstances where future City actions will be addressed only briefly in the Plan.

GENERAL PLAN SPECIAL STUDIES

The General Plan contains certain objectives and implementing policies which describe the need for further studies and plans. The preparation of these studies and plans is necessary to fully implement the General Plan and the community's vision of the City of Oroville into the next century.

The General Plan by definition is a comprehensive and long range guide to the City's physical, economic and social development. It is expected that the actions set forth within the General Plan may be undertaken by the City at any time in the next twenty years. Therefore, it is impossible to establish a schedule or timeline for the preparation of these studies and plans. The City will undertake each action as it deems necessary, and provided both staff and financial resources exist to complete each action.

Since economic development is a guiding principal throughout the General Plan, it is the City's intent that development and growth continue unimpeded within the Planning Area while the various studies and plans are prepared. Unless health and safety issues arise, development consistent with the objectives, policies and intent of the General Plan should be encouraged.

CONSISTENCY BETWEEN THE PLAN AND ZONING

The Zoning Ordinance is one of the City's most important tools for implementing the General Plan. Requirements for consistency between the General Plan and zoning can be broken down in to three aspects²:

- **Uses and Standards.** The General Plan's land use classifications are more general than the Zoning Ordinance classifications. For example, the General Plan has four different categories for residential use, while the Zoning Ordinance is likely to have more. Multiple zoning districts may be consistent with a single General Plan residential classification, as long as all of the densities and unit types allowed in each zoning district are also permitted in the relevant General Plan category.
- **Spatial Correlation.** The Zoning Map should reflect the general pattern of land use depicted on the Plan Diagram. However the two need not be identical. Boundaries of land uses classifications depicted on the General Plan Diagram are generalized; zoning boundaries may be more precise and parcel specific.
- **Timing.** State law allows a "reasonable time" for reconciling any inconsistencies between the Zoning Ordinance and the General Plan³.

1.80 PLANNING AREA/PLANNING SECTORS

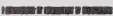
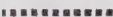
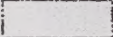
Planning Area. State planning law directs cities to prepare "a comprehensive, long-term general plan for the physical development of ...the city, and of any land outside its boundaries which in the planning agency's judgement bears relation to its planning." A minimum logical Planning Area would be the Oroville Sphere of Influence (ultimate service area) as defined by the Butte County Local Agency Formation Commission (LAFCO). (See GP Figure 1.80-A.) The City's 1992 Sphere of Influence includes all land proposed until this time by the City or the Butte County General Plan for industrial, commercial or urban residential use (one unit or more per acre).

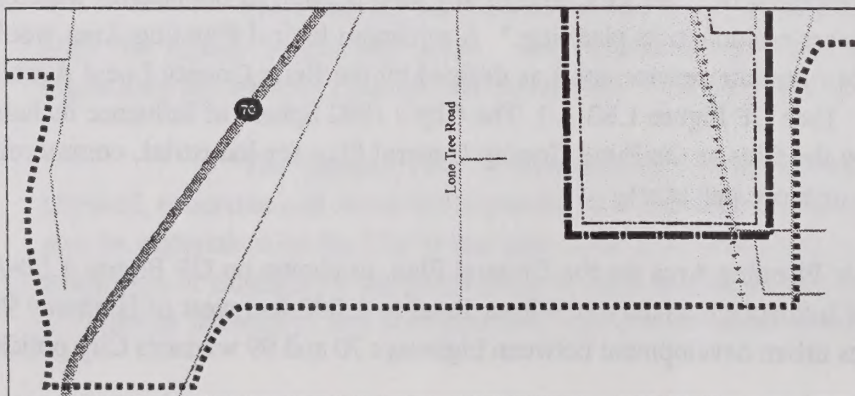
The 84-square-mile Planning Area for the General Plan, as shown on GP Figure 1.80-A, extends beyond the west Sphere of Influence boundary at Wilbur Road to 1,000 feet west of Highway 99. Anticipated pressure for continuous urban development between highways 70 and 99 warrants City policies

OROVILLE PLANNING AREA

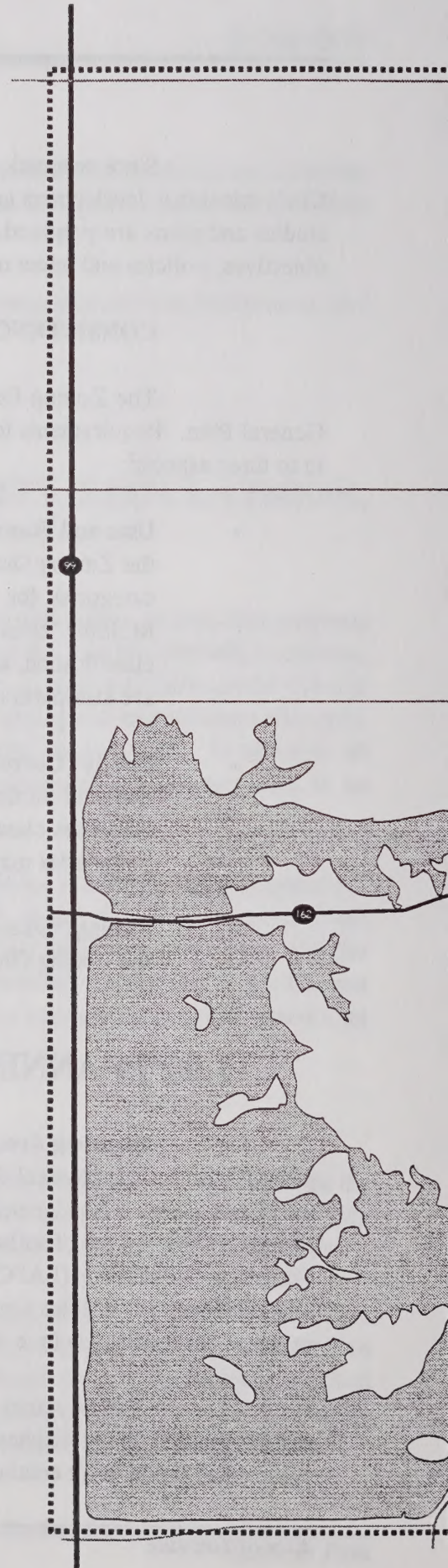
Boundaries

GP Figure 1.80-A

-  Oroville Sphere of Influence
-  Planning Area Boundary
-  City of Oroville Corporate Limit

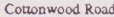


Southern extension of Planning Area



Boundaries

GP Figure 1.80-A



Lake Oroville

South
Thermalito
Forebay

Oroville Municipal
Airport

Thermalito Afterbay

See Inset Map at left

Scale

0 2000' 4000'

1 Mile

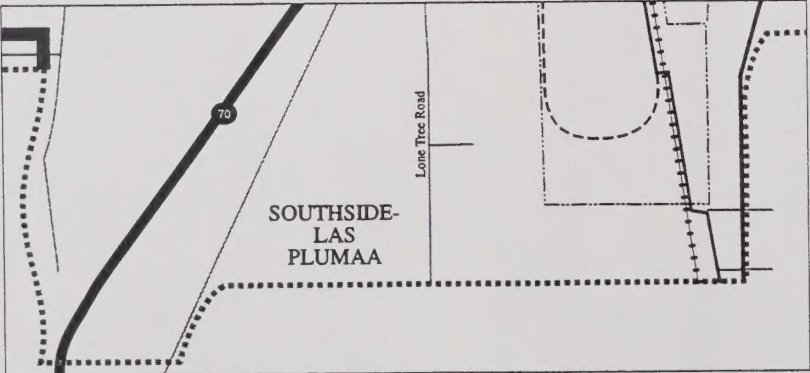


OROVILLE PLANNING AREA

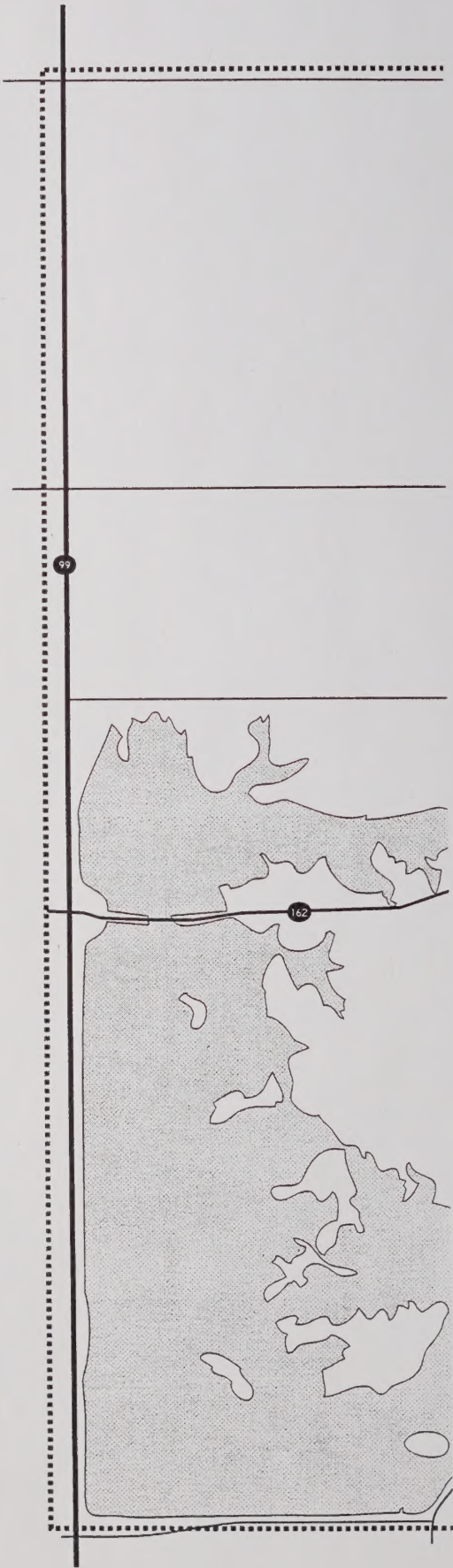
Planning Sectors

GP Figure 1.80-B

- Planning Sector Boundary
- City Limits



Southern extension of Planning Area



Planning Sectors
GP Figure 1.80-B



for the future use of this area. Planning Area extensions west, south and east of the Sphere of Influence boundary bear relation to the City's planning, but do not indicate a decision as to whether these areas should be added to the Sphere of Influence.

Planning Sectors. The Planning Area is divided into seven planning sectors to facilitate description. Sectors are generally aggregations of traffic zones used in the BCAG Traffic Study. These sectors are illustrated in GP Figure 1.80-B. The sectors are:

- Old City
- South Side-Las Plumas
- North (East of Highway 70)
- Northeast
- Foothills
- Kelly Ridge
- Thermalito

1.90 MAJOR CITY, COUNTY, SPECIAL DISTRICTS AND STATE PROGRAMS

The General Plan affects and is affected by the existing programs of the City, County, Special District, and State agencies.

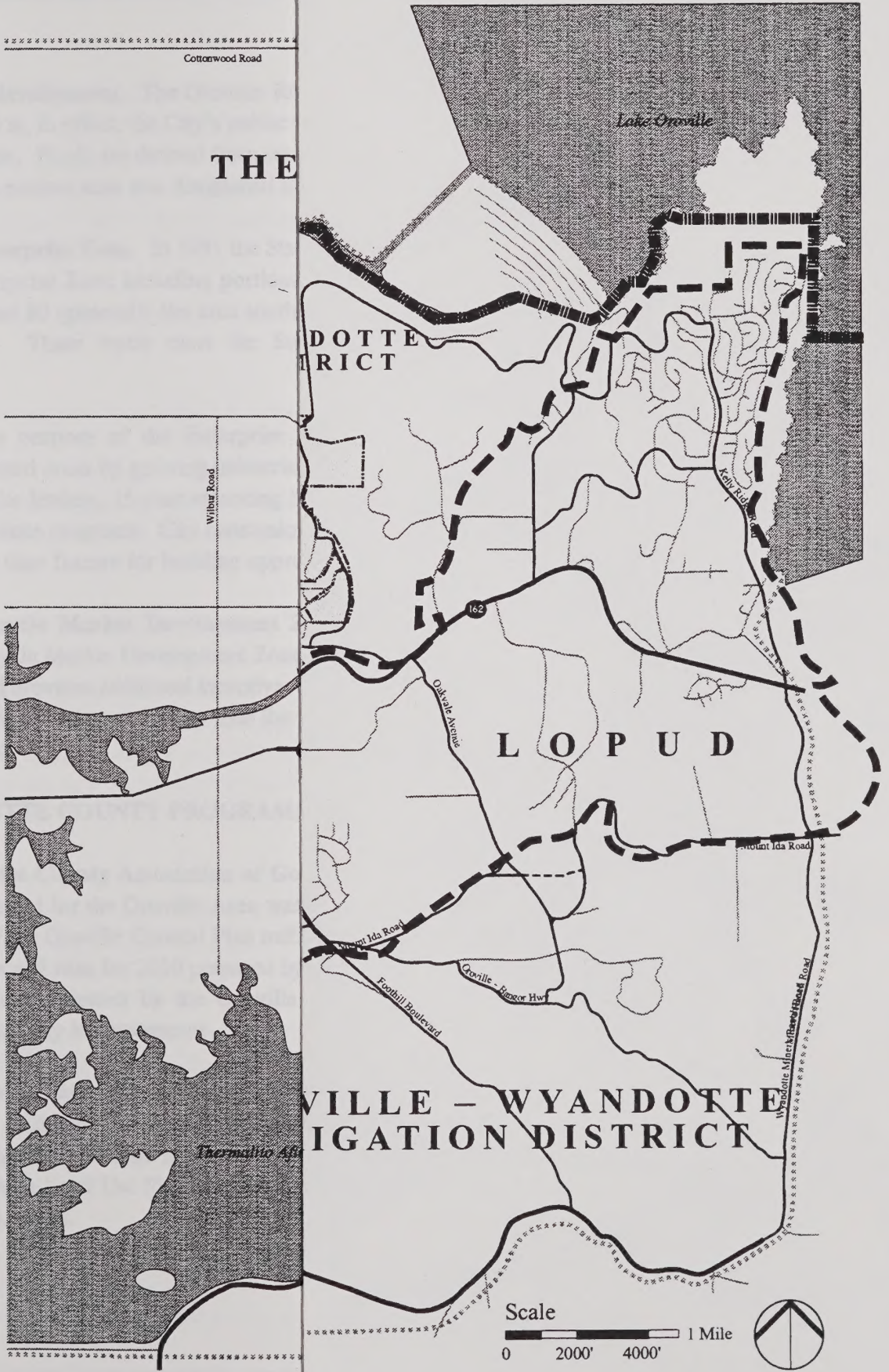
CITY OF OROVILLE PROGRAMS

Annexation. Only 36 percent of the existing Planning Area population is within the corporate limits of Oroville. Thus the City has the image of a much larger community than it really is. Fragmented governmental decisions between the City and County dilute public effort because decisions affecting the entire Planning Area are hard to reach and implement. Annexation proposals have been initiated by the City, but only about 200 residents have been added by annexation since 1980. Where annexation has been rejected, residents apparently have felt that the City's police and fire protection was not worth the slight additional cost (utility tax) or the change in their present community identity. The impact on police protection of Butte County's recent budget crisis, as well as Butte County's passage of a utility tax, strengthens the case for annexation, but there is still much reluctance amongst community members. The General Plan revision process provided a setting for improved communication between the City and unincorporated area residents and an opportunity for the City to demonstrate the mutual advantages of annexation. Section 3.60, Target Annexation Areas, discusses in detail various County lands which the City may consider annexing at a later date.



Special Districts

GP Figure 1.90-A



Redevelopment. The Oroville Redevelopment Agency (RDA) includes nearly all of the City of Oroville and is, in effect, the City's public works funding agency responsible for a broad range of improvement projects. Funds are derived from tax increment financing, defined as the increase in property taxes paid since the project area was designated in 1981.

Enterprise Zone. In 1991 the State of California approved the City's application for the creation of an Enterprise Zone including portions of both the City and unincorporated Butte County in Census Tracts 28 and 30 (generally the area south of the Feather River between Highway 70 and Lower Wyandotte Road). These tracts meet the State's eligibility criteria for economically depressed communities.

The purpose of the Enterprise Zone program is to stimulate economic growth in economically depressed areas by granting industrial users and businesses concessions including tax credits, interest deductions for lenders, 15-year operating loss carry-forward, accelerated expense deduction, and priority for various State programs. City concessions may include below-market lease rates for City-owned property and faster time frames for building approvals.

Recycle Market Development Zone. Similar to the Enterprise Zone, Oroville was designated as a Recycle Market Development Zone in 1993. This zone encompasses the same area as the Enterprise Zone and provides additional incentives to businesses who locate in the zone and utilize recycled products or materials in their processing. The Recycle Market Development Zone's benefits are in effect for a 10-year period.

BUTTE COUNTY PROGRAMS

Butte County Association of Governments (BCAG) Traffic Model. A computerized traffic simulation model for the Oroville Area was prepared in November 1991. The model was used to test the adequacy of the Oroville General Plan trafficway network to serve projected growth over the next 20 years. Earlier model runs for 2010 prepared by the consultant to BCAG assumed less than 50 percent of the development anticipated by the Oroville General Plan, so the Plan understandably proposes additional traffic capacity improvements.

Butte County General Plan Update. Butte County is currently in the process of revising its General Plan. Although consistency between the City and County plans is not required by law, a unified set of development policies is clearly in the public interest. The 1983 Oroville General Plan and the 1983 Oroville Area Land Use Plan adopted by the Butte County Board of Supervisors were consistent in most, but not all, areas.

PUBLIC UTILITY DISTRICTS

Three special districts are the designated providers of sewer and/or water service to most of the undeveloped land in the Planning Area. Their policies and their ability to finance extensions of service will determine where development will occur. These four special districts are shown on GP Figure 1.90-A.

Thermalito Irrigation District (TID) provides sewage collection and water services west and north of the Feather River.

Lake Oroville Area Public Utility District (LOPUD) provides sewage collection in an arc stretching from South Side to Kelly Ridge.

Oroville-Wyandotte Irrigation District (OWID) provides water for residential, commercial, and agricultural use to the eastern portions of Oroville, to the South Side, and to the area south and east of Oroville.

PRIVATE UTILITIES

The California Water Service Company (CWS) is a private utility company and serves the majority of incorporated Oroville. CWS currently has 4,500 connections serving approximately 10,000 persons primarily within the City limits of Oroville. CWS derives 85 percent of its water from the west branch of the Feather River, 10 percent from the State Water Project canal, and five percent from wells.

STATE OF CALIFORNIA

Caltrans. The California Department of Transportation (Caltrans) designs, builds and maintains the Planning Area's three State Highways: 70, 99, and 162. Current plans are described in the Circulation Element.

Department of Water Resources (DWR). The DWR built and now operates the State Water Project, which uses water from Oroville Dam to supply half of the water delivered as far south as Riverside County. Some of the DWR's original duties in the Oroville area have been turned over to the State Department of Fish and Game and the State Department of Parks and Recreation. These agencies cooperate with DWR as subcontractors for specialized services, in the provision of fish and wildlife management, habitat management and recreation operations.

Department of Fish and Game (DFG). As trustees for the conservation of the State's natural resources, the DFG monitors the conditions of fish, wildlife, and vegetation on an ongoing basis, annually summarizes their status, and operates programs designed to preserve or enhance special status

species. Within the Planning Area, the DFG operates the Feather River Fish Hatchery is responsible for maintaining selected fish populations in Lake Oroville, and manages the Oroville Wildlife Refuge.

Department of Parks and Recreation (DPR). The DPR's facilities within the Oroville area are within the State Recreation Area (SRA). DPR facilities are summarized in Table 7.10-A, and shown on GP Figure 7.10-A.

ENDNOTES

1. *General Plan Guidelines*. Governor's Office of Planning and Research, Sacramento, CA, 1990, p. 212.
2. *ibid.* p. 214.
3. California Government Code 65860 (c).

2.0 GROWTH MANAGEMENT PROGRAM

(Reserved for Future Use)

3.0 LAND USE ELEMENT

3 LAND USE ELEMENT

The Land Use Element is the core of the General Plan and establishes a framework of objectives and implementing policies which will guide the community's physical form and growth throughout the next twenty years. As a statement of intent and policy, the following items are discussed within this element.

- Description and location of land use classifications
- Projected additional development and population at buildout
- Location and density of additional multifamily housing and urban expansion
- Designation of environmental conservation areas
- Provision and enhancement of Downtown and visitor services
- Alternative uses for major arterial frontage previously designated for commercial development
- Description and discussion relating to target annexation areas

CONSISTENCY WITH STATE PLANNING LAW

In order to appropriately plan for the community's future population growth and needs, the Land Use Element establishes provisions for the distribution of land uses and intensities, population densities, and building intensities. By setting forth a framework for growth, and the location and intensity of future development, this Land Use Element has been prepared consistent with California State planning law.

California State law requires that a land use element be included within a General Plan (Government Code Section 65302 (a)) and more specifically mandates that the element designate:

"...the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space, including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land. The land use element shall include a statement of the standards of population density and building intensity recommended for the various districts and other territory covered by the plan..."

This Element has been prepared in conformance with the requirements and intent of California State law.

3.10 LAND USE CLASSIFICATIONS

The following descriptions apply to land uses indicated on the General Plan Diagram. The legend on the General Plan Diagram is an abbreviated version of these descriptions. The classifications are adopted as General Plan policy and are intentionally broad enough to avoid duplicating City or County zoning regulations. More than one zoning district may be consistent with a single General Plan use category, and some revisions to the zoning regulations are necessary to implement the General Plan.

Planning Area land which is unincorporated is under the jurisdiction of Butte County, and County zoning regulations apply. The City's General Plan designations for these areas indicate long-term uses that the City may wish to see realized should development occur in the unincorporated area, or following annexation into the City. In the event that land is annexed to the City, re-zoning will occur to reflect the City's General Plan designation.

State law requires the General Plan to establish standards of population density and building intensity for each land use classification. Residential density is expressed in housing units per gross acre; population density can be obtained by multiplying the residential density by the average number of persons per housing unit.¹ For nonresidential uses, a maximum permitted ratio of gross floor area to site area (FAR) is specified. FAR is a broad measure of building intensity that controls both visual building bulk and traffic generation.

The density/intensity standards do not imply that development projects will be approved at the maximum density or intensity specified for each use. Zoning regulations consistent with General Plan policies and/or site conditions may reduce development potential within the stated ranges. (See Section 1.70 regarding the relationship between zoning and the General Plan.) Gross density standards, assumed average buildout densities for residential categories, and FAR standards for nonresidential uses are listed in Table 3.10-A. Densities and intensities indicated on the General Plan Diagram accommodate the projected population that is expected to occur during buildout (See Section 3.20).

**TABLE 3.10-A
DENSITY/INTENSITY STANDARDS**

Land Use Classification	Allowable Range of Residential Density (units per gross acre under 30 % slope)¹	Average Residential Density Used for Buildout Calculations (units per gross acre)²	Maximum Permitted Floor Area Ratio (FAR)
Residential: Very Low Density	0 - 0.2 units (1 unit per 5 acres)	0.125 (1 unit per 8 acres)	na
Residential: Low Density	0.2 - 2.0 units	1	na
Residential: Medium Density	2.0 to 6.0 units	3.8	na
Residential: High Density	6.0 to 20.0 units	12	na
Offices	na	na	0.4
Retail Business and Services	na	na	0.40, except in Downtown where the maximum is 2.0 if separate off-street parking is provided
Airport Business Park	na	na	0.20 and 0.35 depending on the specific location
Industrial Areas	na	na	0.40
Resource Management	1 residential unit with density range of 5 to 40 acre minimums ³	1 residential unit with density range of 5 to 40 acre minimums ³	na

¹Policy 3.30k provides direction for construction on slope areas over 30 percent

²Averages are not adopted as General Plan policy and are used only to calculate probable buildout.

³The allowable density range for Resource Management is consistent with Butte County standards.

Source: Blayne Dyett Greenberg. Modified: Willdan Associates (June, 1994)

RESIDENTIAL

Maximum densities are per gross acre of developable land, provided that at least one housing unit may be built on each existing legal parcel designated for residential use. Second units permitted by local regulation and State-mandated density bonuses for provision of affordable housing are in addition to densities otherwise permitted.

The assumed average densities listed in Table 3.10-A are used to calculate probable housing unit and population holding capacity. Neither the averages nor the totals constitute General Plan policy.

Very Low Density. A maximum of 0.2 units per gross acre (one unit for every five acres) on slopes under 30 percent. The intent is to maintain parcel sizes that can be served by septic wastewater disposal systems consistent with Butte County environmental health standards. Clustered lots as small as 6,000 square feet are permitted if permanent open space is maintained and the overall gross density does not exceed the maximum stipulated in the range. The average density assumed for General Plan calculations is one unit per eight gross acres.

Low Density. 0.2 to 2.0 units per gross acre on slopes under 30 percent. Typical lot size is one-half acre or one acre, but clustered lots as permitted in the Very Low Density category may be substituted. The average density assumed for buildout calculations is one unit per gross acre.

Medium Density. 2.0 to 6.0 units per gross acre on land under 30 percent slope. Current lot sizes in developed areas designated for this category range from 4,400 square feet in the South Side to 10,000 square feet in Pleasant Valley and the smaller lots in Copley Acres. This density is best suited to nearly flat sites because cut and fill slopes higher than 10 feet along lot lines would be necessary to provide level building pads where the natural slope exceeds 15 percent. The average density assumed for buildout calculations is 3.8 units per gross acre, which typically is attained by 6,000 square foot lots on slopes under five percent and represents an average density for projects anticipated to be developed during the Plan period. Because housing at this density reaches the largest market, it is expected to account for about 60 percent of all housing added in the Planning Area over the next 20 years.

High Density. 6.0 to 20.0 units per gross acre plus 25 percent State-mandated density bonus for affordability where applicable. Zoning will implement where the low (6.0 to 12.0 units per gross acre) and high (12.50 to 20.0 units per gross acre) ends of this range will be permitted within the Planning Area.

This classification encompasses a broad variety of housing types, including detached zero-lot-line residences on small (3,500 to 5,000 s.f.) parcels with a typical density range of 7 to 10 units per gross acre, semi-detached residences and duplexes with densities from 8 to 14 units per gross acre, and

townhouses with maximum densities of 20 units per gross acre. All of the housing types mentioned above allow for residences on individual lots with private open space and parking.

Standard multiple family housing units such as tri-plexes, four-plexes and apartments are also permitted within this classification, although apartment-type housing units would not be physically necessary at densities less than 20 units per gross acre. Dense mobile home parks are also permitted within the High Density range. The assumed average for all new High Density development is 12 units per gross acre.

OFFICES

Business and professional offices, with a maximum ratio of floor area to site area (FAR) of 0.40. This classification is applied in areas that are suitable for offices, but not retail businesses. High Density residential uses are permitted within this classification, as is the case under the City's current (1995) RP (Residential/Professional) zoning district. This General Plan initiates Oroville's use of this land use classification by distinguishing between office and retail business service categories.

RETAIL BUSINESS AND SERVICES

Primary uses include business activities which provide goods and services to the community. Maximum FAR is 0.40, except in Downtown where an FAR of 2.0 will be allowed if separate off-street parking is provided. Zoning districts specify where more intense uses such as the production of goods, wholesale storage, and distribution facilities may be located.

AIRPORT BUSINESS PARK

Light manufacturing, limited industrial, food processing, wholesale trade and offices are the primary uses permitted. Retail businesses and public services are permitted as accessory uses. Outdoor storage is only permitted in limited amounts if heavily screened. Projects must maintain architectural and landscape standards normally associated with the term "business park" rather than "industrial area". Maximum FAR is 0.20 in the area bounded by Feather Avenue on the north, Oroville Dam Boulevard West on the south, 20th Street on the east and 24th Street on the west. A maximum FAR of 0.20 also applies to the area north of Oroville Dam Boulevard West and east of the future location of 26th Street. Maximum FAR is 0.35 in all other areas.

This classification is used for the first time in this General Plan. Development standards will be incorporated in the revised zoning ordinance.

INDUSTRIAL AREAS

General manufacturing and distribution in an environment that accommodates the needs of large-scale operations, some of which require extensive outdoor storage. Retail uses are excluded, except those oriented primarily to serving businesses or employees within the Industrial Area. Maximum FAR is 0.40.

PUBLIC FACILITIES AND SERVICES

Schools, governmental offices, the Oroville Airport, local cemeteries and other facilities that have a unique public character. Places of religious assembly are not shown on the General Plan Diagram and governmental facilities that are similar to private offices or industrial facilities are not shown as public.

PARKS

Public parks, golf courses, or other appropriate recreational uses. A recreational vehicle park or campground may be permitted within areas designated as Parks as a conditional use if deemed appropriate with surrounding uses and densities.

ENVIRONMENTAL CONSERVATION/SAFETY

This classification is utilized as an overlay designation to denote areas with significant wildlife habitat and/or physical development constraints. Examples include woodland or wetland open space, riparian corridors (GP Figure 6.11-B) the Oroville Wildlife Refuge, power transmission line corridors, areas of slope exceeding 30 percent, areas prone to landslide and areas prone to 100-year floods as designated by Federal Emergency Management Agency (FEMA).

No subdivisions of land will be permitted for properties located completely within the Environmental Conservation/Safety classification on the General Plan Diagram (unless acceptable evidence is provided by the developer which demonstrates that the classification is not appropriate for the entire site). Since General Plan residential densities are indicated for gross acres of land, no development benefits will be lost and transfers of density will be permitted for land designated Environmental Conservation/Safety, provided that suitable building site(s) exist elsewhere within the parcel to accommodate allowable development without sacrificing habitat values or safety. For areas which are appropriately located entirely within the Environmental Conservation/Safety classification, one residential unit is permitted on each existing legal parcel provided suitable building site(s) and connections to services exist.

RESOURCE MANAGEMENT

Areas primarily devoted to agricultural use, including grazing, crop production and animal husbandry or areas which may contain significant resources such as minerals or wetlands. Agriculture located within areas designated as Resource Management is permitted with fewer restrictions on animal maintenance than in residential classifications. Areas characterized by woodland or wetland open space, riparian corridors, power transmission line corridors, slopes exceeding 30 percent and areas subject to landslides are not shown on the General Plan Diagram in areas designated for Resource Management, but are mapped in Figures 8-A and 8.10-A, which should be referred to at the time of review of applications for projects in areas designated Resource Management. Allowable densities range from 5 to 40 acres depending upon the location of known environmental constraints and resources. Development is limited to one dwelling unit per legally created parcel.

Resource Management areas that do not have any significant environmental constraints or resources and are not intended as permanent community boundaries may at a later date be considered for expansion of urban development if the General Plan population holding capacity is to be increased during a future revision of the Plan. Environmental Conservation/Safety areas in land presently depicted for Resource Management should however be mapped and shown on the General Plan Diagram at the time the General Plan is amended or updated to illustrate the urban expansion.

STATE WATER PROJECT

Land area of the State-owned Oroville-Thermalito Complex.

3.20 ADDITIONAL DEVELOPMENT AND POPULATION HOLDING CAPACITY

Table 3.20-A shows the probable additional development that would result from implementation of the General Plan. Buildout of the General Plan will accommodate an additional 46,746 persons. This additional population and the estimated current population of 33,531 results in a total projected population of 80,277 residents. While no time-frame for buildout of the General Plan is specified, it is reasonable to assume that this level of growth will be reached in 20 years' time, requiring an average annual population growth rate of about 4.5 percent for the Planning Area. By comparison, the actual population growth rate for Oroville averaged 3.3 percent between 1980 and 1990. If actual future growth were to be slower, then buildout will take place over a longer time-period.

**TABLE 3.20-A
ADDITIONAL DEVELOPMENT**

RESIDENTIAL (number of housing units)							NON-RESIDENTIAL (floor area in thousands of sq.ft) (land area in acres)					
	Very Low Density	Low Density	Medium Density	High Density	Others ¹	Total	Retail & Business Services	Offices	Airport Business Park	Industrial	Schools	Parks ²
Planning Sector												
North	0	40	402	1,657	0	2,099	1,173	0	0	0	5	14
Kelly Ridge	1	313	61	187	660	1,222	1,014	0	0	0	12	8
Northeast	0	2	270	713	370	1,640	1,131	690	0	0	8	16
Old City	0	0	0	409	50	459	805	299	0	31	20	90
Thermalito	0	96	2,144	1,528	510	4,278	1,021	0	2,172	0	83	48
Southside-Las Plumas	0	0	2,357	3,058	230	5,645	4,225	0	0	1,583	86	52
Foothills	135	1,035	1,915	532	120	3,737	1,239	0	0	0	83	0
TOTAL	136	1771	7,149	8,084	1,940	19,080	10,608	989	2,172	1,614	297	228
EXISTING POPULATION 33,531												
PLAN INCREMENT POPULATION 46,746 (@ 2.45 persons per housing unit)												
PROJECTED BUILDOUT POPULATION 80,277												

¹Includes projects with approvals and vacant lots on existing subdivisions. A large majority of these are single-family units.

²Neighborhood and Commercial Parks; Special Facilities.

3.30 RESIDENTIAL AREAS

Objectives: Residential Areas

- 3.30a Encourage the expansion of all types of housing at a broad range of densities and prices.
- 3.30b Encourage the preservation of native woodland in areas to be developed by providing guidelines and encouraging the wide-spread planting of oaks and other tree groups on and off the project site under consideration.

See also Policy 6.11z.2.

- 3.30c Provide multifamily housing in sectors of the Planning Area where topography, noise, infrastructure and zoning are appropriate.
- 3.30d Preserve the scale and character of existing neighborhoods by encouraging opportunities to enhance and promote neighborhood identity and neighborhood improvement projects.
- 3.30e Encourage removal of visible household clutter that has a blighting effect in some neighborhoods.
- 3.30f Minimize earth grading by encouraging the use of imaginative engineering and techniques (such as contour grading) in project grading plans.

See also Policy 8.10h and Policy 8.10j.

Implementing Policies: Residential Areas

- 3.30g Require or encourage the transfer of density to preserve orchards, woodlands, and wetlands by clustering development in locations where the land supports fewer resources and the infrastructure is in or is close to the project site.

Up to 90 percent of the cost of a new lot in the Planning Area goes toward improvements. By transferring density and encouraging small lots, street and sewer costs are minimized. In addition, the area's semi-rural character can be retained by requiring land that would have been consumed by large lots to be restricted as permanent open space.

- 3.30h Designate Commercial and Multiple Family zones along arterials where such developments would be most appropriate considering issues such as topography, traffic safety and the

amount of sight distance available. Encourage the grouping of access points onto main arterials and highways.

- 3.30i Inform owners and builders about the possible controversy associated with the construction of residential units within electromagnetic field areas. Encourage the relocation of building sites outside of these areas.

See Section 8.50 for a discussion of electromagnetic fields and standards for location of educational or child care facilities.

- 3.30j Encourage the extension of sewer facilities to the whole Planning Area so long as property owners are willing to bear the cost.

As long as outlying portions of the Planning Area rely on septic systems, parcels smaller than five acres may not be created, although a number of homes exist on smaller parcels. Support for sewers will depend on whether septic failures occur, whether owners of land suitable for development believe they could profit from sewer installation, and on residents' response to the prospect of additional homes. See also Policy 7.32f.

- 3.30k Develop and adopt grading guidelines that promote the utilization of a slope analysis of existing topography as a part of preliminary project planning. The grading guidelines shall include, among others, the following concepts:

- Where development is proposed on slopes between 15 and 30 percent: Design structures to accommodate the topography and minimize grading. Discourage the creation of pads suitable for level-site structure designs.
- Where development is proposed on slopes over 30 percent: Discourage the construction of structures unless no other opportunities exist for construction of a single residence on an existing legal parcel. Restrict subdivision designs so that newly created parcels provide building sites with less than 30 percent slope.

The City of Oroville contains large areas of gently sloping land which may be suitable for development when hillside and grading considerations are recognized. Major grading on hillsides, conducted without guidelines, may impact woodland and exacerbate potential drainage, erosion, water quality and traffic congestion problems. See also Policy 8.10h.

- 3.30l Explore the possibility of obtaining a 100% Federal Demonstration Grant, and work with property owners in the Western Pacific Subdivision to create a housing development with adequate infrastructure on the properties that would be a model for imaginative design of low maintenance, visually pleasing and inspirational housing.

Lacking sewer and water facilities, road access and power, this 600-lot "paper" subdivision in a dramatic wooded setting has only a few dozen houses and mobile homes.

Existing property lines create small lots (5,000 square feet) in a grid street pattern on sloping terrain that is unusable. See also Policy 4l.

- 3.30m Encourage development of a multifamily and single-family attached neighborhood along the north bank of the Feather River opposite Downtown.

This site affords the major opportunity to re-orient Oroville to the Feather River. Two connections to Grand Avenue will be needed. A pedestrian and bicycle bridge connection to Downtown would bolster business, reinforce the historic residential neighborhood, and enable persons of all ages to enjoy reduced automobile dependence. See also Policy 4f.

- 3.30n Prepare and adopt appropriate residential design guidelines or zoning and subdivision regulations to encourage and entice creative and functional multifamily residential projects.

To avoid the pitfalls of unimaginatively designed multifamily residential projects, a comprehensive set of guidelines and regulations are needed. Issues addressed should include:

- *Relationship of residences to the neighborhood and to each other — including issues such as design of noise walls.*
- *Street standards and organization — both dedicated and internal.*
- *Building development standards — including size, bulk and setbacks for different housing types and mixes.*
- *Maximum number of units that can share a common staircase.*
- *Maximum ratio of building coverage to open space and landscaping.*

- 3.30o Continue to organize events and create incentives for householders to sell, recycle or have unused items that detract from neighborhood appearance hauled away.

Yard clutter is a problem in several neighborhoods. The City's recent annual clean-up day is a good start for a well-publicized program to make it easier to store or remove unused items.

3.40 RETAIL AND OFFICE AREAS

Oroville is a regional retail and services center. In 1989, the City's total sales per "trade area resident" were 90 percent of the Countywide average. The "trade area" encompasses Oroville, Feather Falls-Brush Creek, Table Mountain, Berry Creek-Hurleton, and Palermo with a total trade area population of 42,500 residents. The City's high level of sales occurred despite local residents' tendency

to make major purchases in Chico. Since then, the additions of a Wal-Mart store and Food Outlet have strengthened Oroville's position.

After projected buildout occurs, the current 42,500 trade area population (9,000 of whom live outside the Planning Area) is expected to nearly double with per capita sales projected to climb to the Butte County average. Oroville should then be able to support an additional 1.6 million square feet of retail floor area occupying about 150 acres. Expansion of business and professional services, auto repair, entertainment, and recreation services (i.e., non-medical services), will create a demand for approximately 1.2 million square feet of floor area. Much of this need will be in Downtown, along Downtown access corridors, or near Oroville Dam and Feather River Boulevards.

In order to accommodate this projected need for retail and office space, the General Plan Diagram allocates space for expansion of the Oroville Dam Boulevard business district, three or four neighborhood shopping center locations throughout the Planning Area, and two highway services centers.

3.41 DOWNTOWN

Oroville has preserved the character and scale of its historic Downtown, but long-term economic viability will require more housing and jobs located nearby and more patronage by visitors who are currently unaware of Downtown and easily bypass it in route to Lake Oroville. As with nearly all downtowns, Oroville's success will depend on offering a pleasant environment for pedestrians in which specialty shops, restaurants, and interesting recreational opportunities can be discovered.

Objectives: Downtown

- 3.41a Continue to preserve and enhance Downtown and its adjoining historic residential neighborhood.

This Downtown is what distinguishes Oroville from the suburbs that most visitors and new residents are fleeing. Oroville's success will depend in large part on the City's ability to protect and enhance this resource and to attract those people traveling and shopping within other historic communities to visit Oroville.

- 3.41b Encourage building restoration and development for Downtown buildings, while working to conserve the historic value of the structures.

Except for medical offices that need to be near the hospital, there is no strong competing location for accountants, attorneys, dentists, realtors, engineers, and other local-serving office tenants. In addition to Downtown residents, employees and users of such potential businesses would help support other Downtown activities.

- 3.41c Encourage the addition of housing and accommodations within walking distance of Downtown.

Locating such land uses near the downtown area would further encourage the area's diversity and vitality.

See also Policy 3.43d.

Implementing Policies: Downtown

- 3.41d Market the Downtown to residents and visitors alike using the State Theater, the Farmers' Market, directional signs, and cooperative advertising and promotional events.
- 3.41e Identify gaps in available merchandise and services and recruit experienced operators who would like to live in Oroville.

Retail viability will depend on owner-managed businesses that offer unique service, selection and quality.

- 3.41f Institute Downtown housing preservation programs using Redevelopment Area revenue and funds from the Federal Community Development Block Grant (CDBG) program.

Preserving locally historic homes will add to the unique and historic character of downtown, while at the same time ensuring pedestrian accessible housing close to Downtown.

3.42 OROVILLE DAM BOULEVARD

Virtually all of the Planning Area's high volume retailers are located on Oroville Dam Boulevard's 1.6 mile strip along Highway 162. The range of retailers and services include food stores, department stores and automobile dealerships. This area accounts for about three-quarters of the retail floor area within the community and a larger share of total sales.

Heavy traffic on Oroville Dam Boulevard makes access between shopping centers awkward, but high visibility and ample parking have helped make the area a success. A few sites are vacant and some are under used, but with a projected doubling of trade area population, there will be little frontage available for expansion.

To maintain its vitality, Oroville Dam Boulevard will need enough expansion area to enable Oroville to maximize sales without approving a large outlying shopping center. The General Plan Diagram provides approximately 160 acres south of Oroville Dam Boulevard for commercial use — enough for a million square feet of floor area each for retail and services. This proposal is dependent on access from an east-west parallel arterial proposed by the Plan to serve the dual purposes of relieving congestion on Oroville Dam Boulevard and facilitating growth of the business district.

Objectives: Oroville Dam Boulevard

- 3.42a Maintain Oroville Dam Boulevard between Highway 70 and Olive Highway as one of the Planning Area's primary retail districts.

The General Plan provides for additional neighborhood shopping centers, neighborhood stores, and highway commercial areas, but does not envision another single shopping center or retail area that would duplicate the concentration of stores and services found on Oroville Dam Boulevard.

- 3.42b Maintain accessibility to existing retail establishments and provide for a retail expansion area by constructing a parallel arterial south of Oroville Dam Boulevard.

(See also Policy 3.42d and 3.42e and Circulation Element Section 5.20). Maximum retail benefit will result if the new street is close to Oroville Dam Boulevard and has direct end connections so that it will be equally attractive to through traffic. The most desirable alignment would allow continuous retail facilities to be located behind existing Oroville Dam Boulevard retail frontage. Existing north-south streets would facilitate circulation between stores on both streets.

- 3.42c Improve the appearance of Oroville Dam Boulevard.

Sign clutter, undefined and barren parking lots, and intermittent development give the street an unpleasant and scattered appearance. Curbs, sidewalks, and trees within the State Highway right-of-way are needed to create a harmonious and pleasant street environment.

Implementing Policies: Oroville Dam Boulevard

- 3.42d Designate a Specific Plan Area to include the proposed alignment for increasing traffic capacity between Highway 70 and the foothills. Approve development within the corridor only with a finding that potentially feasible circulation facilities will not be adversely affected.

The General Plan Diagram indicates a proposed alignment for the new east-west arterial, but future right-of-way will not be fully protected until the Specific Plan described below is adopted.

- 3.42e Upon completion of Implementing Policy 5.20l, prepare a Specific Plan for the new arterial and for expansion of the retail area.

Engineering studies to define one or more viable alignments for the new street should be followed by preparation of a financing plan, public discussion, and agreement with

Caltrans regarding Highway 70 interchange modification. The Specific Plan will define the retail expansion area, establish development standards for the street and for the retail area, and protect future right-of-way from development until it can be acquired.

- 3.42f Prepare a traffic and landscape plan for Oroville Dam Boulevard and establish design standards for abutting development.

Traffic issues to be addressed by the Plan will include Caltrans policies for State highways, potential for increasing capacity by providing additional turn lanes at intersections, and consolidation or limitation of driveways. Design standards will consider needs for business identification versus advertising signs, on-site landscaping standards, and potential site-to-site circulation routes that would reduce on-street travel and encourage shoppers to visit more stores. The potential of having Caltrans make some necessary improvements as part of a larger agreement with the City needs to be explored.

- 3.42g Confine the limit and extent of strip commercial/retail uses along Oroville Dam Boulevard between Olive Highway and Orange Avenue. Where feasible, Office designations shall be utilized as a buffer between the arterial and residential uses.

Since the Plan's intent is to prevent the proliferation of strip-commercial uses east of Olive Highway, limited commercial and office uses are designated along Oroville Dam Boulevard east of Olive Highway.

3.43 VISITOR SERVICES

In order to entice travelers and individuals from neighboring communities to visit Oroville, the community needs accommodations with distinctive character in addition to unique services and attractions.

Objectives: Visitor Services

- 3.43a Encourage the concentration of visitor accommodations on Feather River Boulevard from Bed Rock Park south and on sites overlooking and relating to the Feather River.

Feather River Boulevard provides a much more pleasant motel environment than most cities offer. In addition, the boulevard would be further enhanced if street trees were established to create a visual tie to the historic neighborhoods to the east.

- 3.43b Maintain easy access to and from the freeway but orient accommodations toward Feather River Boulevard.

- 3.43c Provide linkages with visitor and traveler services through the use of Highway 70 landscaping that is keyed to the visitor service area identity.

- 3.43d Encourage bed and breakfast accommodations to expand visitor choice and promote the preservation and restoration of Victorian homes.

B&B patrons are a segment of the visitor market that will support Downtown restaurants and antique stores. Large Victorian homes nearby, some in dire need of restoration, are possible candidates for conversion.

Implementing Policies: Visitor Services

- 3.43e Provide zoning regulations for bed and breakfast accommodations.

B&Bs should be listed as a conditional use in specified zoning districts, together with findings necessary for approval.

- 3.43f Encourage private sector coordination with the FRRPD's efforts to develop visitor service facilities near the Bed Rock Park area.

- 3.43g Encourage the FRRPD in their efforts to develop the Riverbend Park area.

3.44 NEIGHBORHOOD SHOPPING

Neighborhood shopping centers located in larger urban areas usually consist of a supermarket and often a drug store and shops on a six to 10 acre site. In Oroville all such facilities are on or near Oroville Dam Boulevard, although small grocery stores are scattered throughout the Planning Area. Without strong neighborhood shopping centers within a mile or two of most homes, the projected doubling of the Oroville trade area population would cause peak hour traffic congestion that would be difficult to manage.

A guiding principle for locating neighborhood shopping is that at least 10,000 trade area residents are needed to support a supermarket that must compete with large existing markets. Commensurate with projected population growth, the General Plan Diagram designates locations for new neighborhood shopping centers, or additions to existing ones, in the following areas:

1. **Thermalito:** A new 10-acre center on Oroville Dam Boulevard West in the vicinity of 14th street.
2. **North of Feather River:** A new center on Nelson Avenue east of Highway 70. The Plan also reflects existing retail uses near Garden Drive.
3. **Foothills-Las Plumas:** 10 acres along the planned Ophir Road extension, east of Lower Wyandotte Road.

4. **Kelly Ridge and portions of the Foothills sector:** Revitalization of an existing five-acre center on Olive Highway at Miners Ranch Road, in addition to parcels across from and adjacent to this site.
5. **South Side Las Plumas:** A large commercial area located on the east side of Lincoln Boulevard between Monte Vista Avenue and Ophir Road.

Objectives: Neighborhood Shopping

- 3.44a Preserve and encourage small neighborhood grocery stores that provide everyday needs close to residential areas.
- 3.44b Approve neighborhood shopping centers, each anchored by a supermarket of 15,000 square feet or more, and each serving one of the trade areas described above.

Implementing Policies: Neighborhood Shopping

- 3.44c Locate neighborhood grocery stores not exceeding 2,500 square feet in size wherever they can be supported and will not create unacceptable traffic problems or nuisance due to hours of operation. Approval of neighborhood grocery stores outside areas designated for Retail and Business Services use by the General Plan Diagram does not require a General Plan amendment, but will require that the Zoning Ordinance be revised to allow such grocery stores as a permitted or a conditional use.
- 3.44d Work closely with project proponents and provide conceptual approval of neighborhood shopping centers. Provide final site plan approvals only after the expression of interest by appropriate major tenants has been demonstrated and the project plans are consistent with the design standards which are applicable to the specific site.

3.45 HIGHWAY FRONTAGE

Nearly all of the eight miles of Highway 162 between 14th Street in Thermalito and Miners Ranch Road in Kelly Ridge is currently zoned Highway Commercial. Existing commercial development consists of a few neighborhood stores occupying perhaps two to four percent of the frontage in Thermalito and east of Foothill Boulevard, and several automotive sales and service establishments on Oroville Dam Boulevard West. If all of this frontage were in commercial use, traffic congestion would be unacceptable. The General Plan Diagram provides approximately 160 acres for expansion of typically highway-oriented businesses adjoining Highway 70 near the Garden Drive and Ophir Road interchanges.

Objectives: Highway Frontage

- 3.45a Designate traveler-services clusters at freeway interchanges.
- 3.45b Identify traveler and visitor services to freeway travelers. Potential new commercial development should be limited to the Highway 70 freeway interchange areas at the Garden Drive and the proposed Ophir Road interchanges.

Oroville's retail establishments are not currently focused on the freeway, and in addition there is no large potential customer share that must be convinced to leave the freeway. Oroville has no major inter-metropolitan area customer stream to intercept, and it will be a more attractive community as seen by both residents and visitors if businesses present themselves to the community, not the freeway.

Implementing Policies: Highway Frontage

- 3.45c Establish the future Highway 70/Ophir Road interchange as the southern boundary of the Pacific Heights Road commercial area.

This is the Planning Area's only existing freeway-oriented commercial area. In the interest of consolidating commercial development at locations accessible to area residents and avoiding freeway strip commercial appearance, the commercial designation on the area south of the interchange as shown on the 1983 Butte County Oroville Area Land Use Plan is eliminated.

- 3.45d Establish a Highway Service commercial area in the easterly quadrant of the Garden Drive/Highway 70 interchange.

This location is currently zoned for, and would be appropriate for, service stations and food service oriented to both Oroville-Chico and through-traffic.

- 3.45e Permit existing businesses along Olive Highway to continue to operate and expand or change in use subject to a conditional use permit within areas designated as residential in the Plan.

3.46 OFFICES

Even in a community known for its resource-based manufacturing, an increasing share of the jobs are in offices or occupy office-type space. Three categories of office users can be identified:

1. **Health Care:** A growth industry nationally and locally, health care providers are increasingly clustered near major hospitals. The Planning Area's large retirement

population will cause the growth rate of health care employment to exceed the overall employment growth rate. Oroville Hospital's 800 jobs (1994) make it the area's third largest employer.

As the population is projected to double, the space needs of the medical complex can also be expected to more than double. Many California cities have experienced a painful process of hospital expansion into adjoining residential neighborhoods. Oroville Hospital and the neighboring medical offices already experience access and parking problems.

2. **Other Local-Serving Professional and Administrative Offices:** These include real estate, law, insurance, financial services, engineering, and other professional and business services. Total floor area occupied is relatively small, but most firms benefit from proximity to similar firms and, when clustered, offices provide essential support for Downtown. The General Plan urges expansion of existing offices in and adjoining Downtown, the Lincoln Street/Myers Street corridor between Downtown and Oroville Dam Boulevard, and along Oroville Dam Boulevard between Olive Highway and Orange Avenue.
3. **Region-Serving Administrative Offices:** Butte County, the only existing example of a region-serving administrative office, is the Planning Area's largest employer. The types of private sector region-serving offices that select locations with low cost for space, such as insurance claim processing firms, have generally favored communities the size Oroville is expected to reach by buildout.

Objectives: Offices

- 3.46a Strongly encourage Oroville Hospital, in cooperation with adjoining landowners, to prepare a long range development plan for the Medical Center neighborhood. Issues to be addressed should include:
 - Long term space needs for the hospital, medical offices, care facilities if appropriate, and parking and landscaping.
 - Providing a single, signalized access to the complex from Olive Highway and reducing the need for turns on Olive Highway by adding direct access from one or more other arterials.
 - The possibility of expanding parking and storage under or near power transmission lines to make land available for hospital expansion.

- 3.46b Encourage concentration of local-serving offices in and near Downtown.

Although offices are a permitted use in commercial areas, most will enjoy stronger identity, greater convenience to those with whom they do business, and lower cost in Downtown or along Downtown access corridors. See also Policy 3.41b.

- 3.46c Compete for region-serving offices.

Computer networks, facsimile, and overnight delivery services greatly reduce the need for information processing businesses to locate in major population centers. Oroville can offer low costs, low employee turnover, and high visibility sites along Highway 70 or in the Airport Business Park.

3.50 INDUSTRIAL AREAS

About 70 percent of Oroville's manufacturing jobs are in two resource-based industry groups — forest products and food processing. Established in Oroville in 1990-91, Roplast (70 jobs, plastic food bags) and Spectra-Physics (108 jobs, machined parts for laser equipment) demonstrate Oroville's ability to attract industry. Although Oroville is further from major markets than its more southerly Central Valley competitors, its lower real estate prices and favorable location within the foothills are attractions.

In 1990, the Oroville City Council adopted three priority target industries: bulk materials handling equipment, forest-related products, and health care-related industries. In 1991 the State of California Department of Commerce designated the commercial and industrial area east of the Feather River (Old City and South Side/ Las Plumas sectors) as an Enterprise Zone. The goal of the program is to attract job-creating businesses to low income areas by offering State and local tax credits and other incentives.

In 1993 the City also received a Recycling Market Development Zone designation. This type of zone is designated to attract businesses which will convert goods from the waste stream into recycled products. Such businesses locating within the zone benefit from streamlined regulation processes, access to low-cost State loans and technical assistance from the California Integrated Waste Management Board.

Objectives: Industrial Areas

- 3.50a Encourage diverse industrial environments that will appeal to a broad range of manufacturers and distributors to assure probable opportunities to operate profitably in Oroville.

Employers as diverse as lumber mills and high-tech light manufacturing need assurance that the different design and environmental standards they want and can meet will be maintained at the Oroville location they select.

- 3.50b Provide sufficient industrially zoned land to ensure a choice of sites for industrial development.

The 1983 General Plan designated 4,125 acres for industry. This is more than five times the amount of land that is projected to be occupied at the time of buildout if 20 percent of the workforce were employed in manufacturing at an average of 10 persons per acre.

- 3.50c Strive to locate industries that maintain the highest site development standards on the most visible sites and provide assurance that adjoining development will be compatible.

Absence of clear standards leaves both the City and the applicant uncertain as to what standards should be required by the Site Plan and Development Review process specified in the Zoning Ordinance. Without such standards, a potential owner does not know what standard will be met by future development nearby.

- 3.50d Maintain development and operating standards that give evidence of a community commitment to a high quality community.

State and regional agencies regulate air and water quality and the use and disposal of toxic material. Local zoning ordinances set standards for heat, glare, noise and appearance.

Implementing Policies: Industrial Areas

- 3.50e Strive to locate new industries that require extensive outdoor storage and open structures, or that produce emissions which may be detectable off-site, in the designated Industrial Area south of Cal Oak Road and east of the open drainage channel between Feather River Boulevard and South 7th Avenue.

The buffers encouraged in the General Plan between industrial and other uses will lessen the unattractive and industrial image given to residents and those visiting the community.

- 3.50f Adopt policies and procedures that will enhance and that are compatible with the possibilities that have been made viable through the Oroville Enterprise and Recycling Zones for the siting of various industries throughout the Greater Oroville community.

- 3.50g Strive to locate light industrial uses with landscaped parking and no outdoor storage requirements on either side of Feather River Boulevard, between Cal Oak Road and Georgia Pacific Way.

- 3.50h Establish high standards for building and landscape design, materials and maintenance to be met by offices and manufacturing industries in the Airport Business Park.

The Airport Business Park is Oroville's best opportunity to compete with all northern California business parks for tenants who want to leave high-cost, long-commute metropolitan locations. Design guidelines should be adopted to ensure high quality development standards are implemented.

- 3.50i Work to secure agreement from the Federal Aviation Administration (FAA) to permit sale of land in the Airport Business Park.

Ready-to-build sites are available under maximum 55-year lease for \$1 per acre per year (1995), but there are few takers. Many businesses seek built-for-lease space that abounds in the metropolitan areas but has been unavailable in Oroville. Business owners who are willing to build want to own the land.

- 3.50j Strive to locate industrial buildings and industries requiring extensive outdoor storage areas within the Industrial Unit No. 2.

- 3.50k Strive to locate industries in the area east of the mainline Union Pacific Railroad that are compatible with nearby residential areas.

This area includes both small lots and 50+ acre parcels. The area east of Lincoln and north of Ophir, designated industrial on the 1983 City and County general plans, presents the only opportunity to reduce the excess supply of industrial land. It is designated as Retail and Business Services, High and Medium Density residential on the revised General Plan Diagram. The industrial area that remains nearby should be developed to industrial park standards.

- 3.50l Encourage and facilitate the reversion of excess Department of Water Resources lands to public or private revenue generating uses.

- 3.50m Encourage and facilitate the efforts of the Oroville Industrial Development Corporation to attract employment and revenue generating uses (such as the efforts to attract Fortune 500 companies to various sites and properties within the Greater Oroville Area) through flexible land use, zoning and environmental considerations.

3.60 TARGET ANNEXATION AREAS

Historically, the City of Oroville has not had an aggressive annexation policy. Property owners who have approached the City with interest in or a desire to annex to the City have been accommodated, but the City in most instances has not made significant efforts to actively solicit applicants for annexation. The City's philosophy has been to incorporate property owners who express a desire to become a part of the City, but not to force the concept on property owners who would rather remain within the unincorporated area. This approach is not anticipated to change drastically in the future.

However, the City has chosen to identify three Target Areas based on the following:

- Recent interest in annexation expressed by several property owners, most of whom are located within the Oroville Enterprise Zone where City review, processing and development standards already apply to new commercial and industrial development projects;
- The City's desire to create more logical jurisdictional boundaries and ensure efficient provision of services as part of its long-range planning efforts;
- A desire by the City to more efficiently direct and guide development of properties along the west side of Highway 70 due to this area's highly visible location as the main entrance into the Oroville Community.

Areas identified for future annexation by the City are referred to in this document as Target Areas 1, 2, and 3, and have been identified on GP Figure 3.60-A.

Target Area 1. Contains approximately 485 acres and is generally bounded by the Sacramento Northern Railroad right-of-way on the north, Pacific Heights Road on the south, Highway 70 on the east and Feather River on the west.

Existing development within Target Area 1 consists of a variety of land uses including aggregate mining operations, a small industrial park, light manufacturing uses, indoor and outdoor storage facilities, a trailer park, campground/RV park, family recreation center and vacant land.

Several property owners within this area have expressed interest in annexing their property to the City in the future. Annexation of this area would be beneficial to the City due to the area's highly visible location along the west side of Highway 70. Since this corridor serves as the main entrance into the Community, its visual appearance contributes greatly to a motorist's or newcomer's perception of Oroville as a whole. More direct City control over the design and development of this area would be desirable. Target Area 1 is already located within the City's existing Sphere of Influence, therefore no modification of the Sphere would be necessary prior to application for annexation.

Target Area 2. Consists of a semi-triangular shaped area containing approximately 420 acres. The area is bounded by Georgia Pacific Way on the north, Ophir Road on the south, Baggett-Marysville Road on the east and Highway 70 on the west.

This area is already largely developed with uses such as Louisiana Pacific and Koppers Industries. The Koppers site has been identified as a Superfund site by the EPA and has been undergoing intensive soil and ground water remediation.

Properties within Target Area 2 are located entirely within the Oroville Enterprise Zone. According to a Memorandum of Understanding between the City of Oroville and the County of Butte, executed on October 1, 1991, all commercial and industrial projects located within the Enterprise Zone shall be processed by the City of Oroville. Since the City is already responsible for processing of

OROVILLE PLANNING AREA

Target Annexation Areas

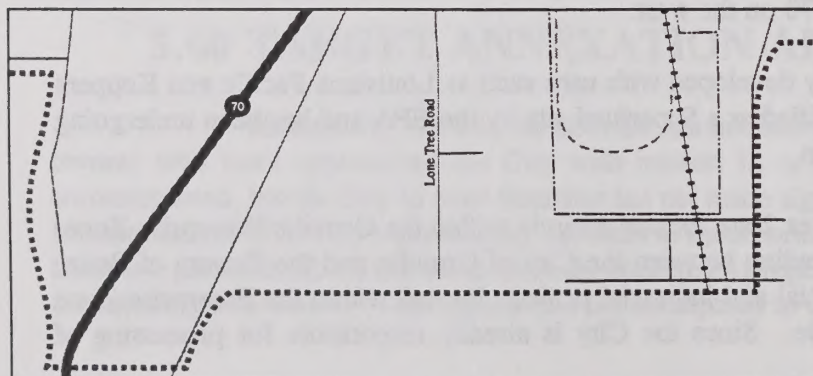
GP Figure 3.60-A



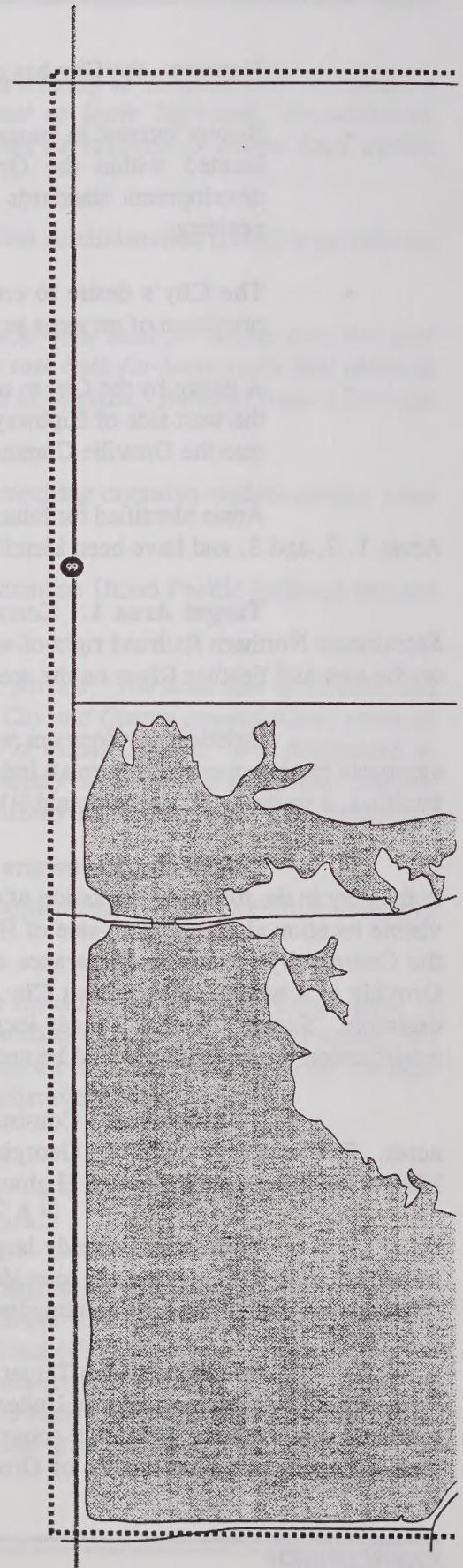
Target Areas



City Limits

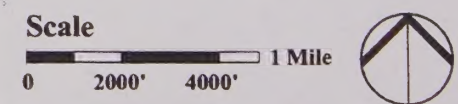


Southern extension of Planning Area



Target Annexation areas

GP Figure 3.60-A



development applications in this area and development projects are subject to City Standards, property owners in this area have expressed an interest in pursuing formal annexation.

Target Area 3. Consists of a 600 acre area that is generally bounded by Arnold Avenue on the north, the south boundary line of Section 32, Township 19N, Range 4E on the south, Lincoln Boulevard and V-B Road on the east, and the existing City limit line parallel to the Union Pacific Railroad right-of-way on the west.

The majority of this area is currently undeveloped. Established uses include the Memorial Cemetery, lumber related operations, and light manufacturing uses. The entire site is located within the City's current Sphere of Influence. A large portion of Target Area 3 is also located within the Oroville Enterprise Zone.

PROVISION OF PUBLIC SERVICES AND FACILITIES

Water and Sewage Disposal. Water and sewage disposal needs within Target Area 1 are currently accommodated through the use of individual wells and on-site sewage disposal systems. This area is relatively isolated and outside the Sphere of Influence of any public water or sewer providers. No extension of public water or sewer facilities is anticipated within the Planning period due to the presence of physical barriers such as Highway 70 and the Feather River, which would make extension of those facilities extremely costly.

Future water and sewage disposal systems needed to accommodate new development will be required to meet the requirements of the Butte County Environmental Health Department. Future development will also be subject to the fire flow requirements specified by the Oroville Fire Department.

Target Area 2 is located within the service area of the California Water Service Company (CWS). This is a private utility company that serves water needs for a majority of incorporated Oroville. CWS derives approximately 95% of its water from the surface waters of the Feather River and the remainder from deep wells. CWS currently uses slightly more than half of the water guaranteed to the company by its agreement with PG&E and currently has excess treatment capacity.

According to Public Works Department records, the closest water line to Target Area 2 is located on the north side of Georgia Pacific Way. Flows within this area are adequate for domestic service, however, the need for an additional well or above ground storage tank has been identified in order to generate adequate pressure to consistently meet the fire flow requirements of the Oroville Fire Department. The City and CWS have been working cooperatively to resolve this issue and plan for the water service needs of future development.

Target Area 2 is located within the sewage collection area served by the City of Oroville. The closest existing line is located on the east side of South Fifth Avenue. Extension of this line would be necessary to serve existing and future uses in Target Area 2.

Sewage collected within the City's system is transported to the Sewerage Commission - Oroville Region (SC-OR) facility on South Fifth Avenue. SC-OR is the tri-agency commission composed

of representatives from the City of Oroville, Lake Oroville Public Utility District (LOAPUD), and the Thermalito Irrigation District (TID), that is responsible for wastewater treatment in the Planning Area. SC-OR operates an activated sludge sewer treatment plant with a design capacity of 6.5 million gallons per day (MGD). Dry weather flows from the three member agencies range between 3 and 3.5 MGD. Wet weather flows can go as high as 17 - 17.5 MGD. Flows in excess of 12 MGD must be stored and treated at a later time.

In 1983, the City implemented recommendations of a study that concluded that increasing treatment capacity at the SC-OR plant was substantially more cost-effective than undertaking wholesale repair of City sewer lines. Accordingly, the SC-OR plant has installed emergency storage capacity of 20 million gallons. The plant currently has enough capacity to serve more than 9,000 additional equivalent dwelling units or 3 MGD. SC-OR intends to collect enough money from new connections to provide for future treatment plant expansion.

Water service for Target Area 3 is provided by the Oroville-Wyandotte Irrigation District (OWID). Existing water lines ranging in size between 8 and 12 inches are located within Lincoln Boulevard, Ophir Road and a portion of Kusel Road between Lincoln Boulevard and Custer Lane. OWID derives its water from the surface waters of the South Fork of the Feather River through an elaborate system of dams, ditches and conduits. The District claims water rights to 800,000 acre feet annually, has developed water sources of approximately 400,000 acre feet annually and currently uses 30,000 acre feet annually. The largest constraint to water supply in the District is the 12 MGD treatment capacity at the Miner's Ranch Reservoir Plant. The plant has a 1994 excess treatment capacity of 1.46 MGD, which would allow for approximately 2,000 more connections. Enhancement of the treatment capacity will require a substantial capital expenditure, estimated at \$5 million in 1991, in order to double capacity to 24 MGD. Continued exploration of possible funding sources will be necessary in the future.

The current sewage disposal needs of existing development within Target Area 3 are accommodated through the use of on-site sewage disposal systems. However, the area is located within the Lake Oroville Area Public Utility District's (LOAPUD) Sphere of Influence. LOAPUD presently provides sewage collection services for 4,348 housing units and 307 commercial sites in areas south and east of the City, but does not have any existing sewer lines within immediate proximity to Target Area 3. Extension of existing lines is expected to occur gradually as development increases. Any future on-site sewage disposal systems that are installed will need to meet the requirements of the Butte County Environmental Health Department.^{2,3}

Public Utilities. Pacific Gas and Electric, Pacific Bell and Viacom Cable are the primary providers of public utilities within the Planning Area. Coordination with these utility providers is on-going and will continue as new development occurs in all three of the Target Areas.

Police and Fire Protection. According to representatives from the Oroville Police Department, annexation of Target Areas 1, 2 and 3 would have less than a significant impact on the ability of that department to provide services to those areas. Department records indicate that most of their service calls are generated from retail type commercial and high density residential uses. Due to the limited amount of both types of uses within these areas, it is not likely that a significant increase in demand for police services would occur. Current staffing levels consist of 23 sworn officers, 11 non-sworn

personnel and an average of 5 reserve officers. This level of staffing is considered adequate to serve present development within Target Areas 1, 2 and 3 and cause only minor modifications to existing patrol patterns. It is anticipated that staffing levels will gradually increase in the future based on the needs generated by new development.⁴

The City's only fire station is currently located on Lincoln Street north of Mitchell Avenue. Response times to properties within Target Areas 1, 2 and 3 are estimated to be between 3 and 5 minutes. The City already has automatic aid agreements with the El Medio Fire District, Butte County and the California Department of Forestry and is presently considering a "boundary drop" agreement which would basically require the closest station to any fire to respond first to the incident.

In addition to automatic aid agreements with other fire service agencies, a future fire station is identified on the General Plan Diagram in the vicinity of Ophir Road and Lincoln Boulevard. This location will improve response times to all three Target Areas. Construction and operation of that station will occur in conjunction with the needs and demands created by future development activity.⁵

Public Works Activities. Annexation of Target Areas 1, 2 and 3 would include several roads which are currently maintained by the Butte County Public Works Department. The City's road maintenance efforts are funded by a combination of gas tax monies and general fund resources. The cost of providing maintenance and any upgrading of existing facilities is anticipated to be off-set by gradual increases in revenue generated by annexation of this area. These funds can be utilized for materials and additional personnel as needed in the future.⁶

Parks and Trees Department Services. The City's Parks and Trees Department is responsible for developing and maintaining the City's parks system, care of special facilities such as the Lott Home and Chinese Temple, administration of the City's street tree program and monitoring/enforcement of Landscape Maintenance Agreements. Since development within Target Areas 1, 2 and 3 consists primarily of light manufacturing, industrial and a limited amount of commercial uses, no new park facilities are proposed.

The Target Areas do not contain any existing street trees, however, gradual implementation of this program is anticipated in conjunction with new development. Irrigation of a large number of existing street trees within the City is completed through the use of water tank trucks. Landscape lighting and maintenance districts can be used as appropriate to fund Parks Department maintenance of new street trees.⁷

Objective: Target Annexation Areas

- 3.60a To facilitate property owner requests with regard to future annexation, attempt to establish logical jurisdictional boundaries for the City and ensure the adequate provision of services.

Implementing Policy: Target Annexation Areas

- 3.60b Through the City's General Plan and as a statement of policy, the City of Oroville will work to facilitate the annexation of Target Areas 1, 2, and 3 as identified on GP Figure 3.60-A. Annexation shall be coordinated with the appropriate property owners, service providers and in substantial conformance with Butte County LAFCo Guidelines.

ENDNOTES

1. 2.45 for the Planning Area in 1990 (total population divided by total housing units; approximated from 1990 U.S. Census).
2. *Oroville Enterprise Zone Final EIR*, Oroville Community Development Department, September 1991
3. *Oroville-Thermalito Area, Sphere of Influence Study*, Butte County LAFCo, April 1985
4. Oroville Police Department, July 1995
5. Oroville Fire Department, July 1995
6. Oroville Public Works Department, July 1995
7. Oroville Parks and Trees Department, July 1995

4.0 CITY DESIGN ELEMENT

4 CITY DESIGN ELEMENT

As a statement of intent and policy, the City of Oroville has developed a City Design Element as part of this General Plan. The purpose of the Design Element is to identify the City's unique physical resources, and set forth general objectives and implementing policies to preserve and enhance these resources. Correspondingly, the objectives and policies are intended to provide guidance as part of subsequent project specific reviews and the establishment of city-wide design related programs.

While the City Design Element is not State mandated and is an optional part of a General Plan, the objectives and implementing policies are intended to set forth a basic set of principles and programs to maintain Oroville's heritage while new development occurs. When combined with other General Plan Elements and subsequent design related programs, this Element expresses the community's commitment to recognizing the essence of Oroville and continually improve the visual character of the City.

Provided below is an overview of existing City conditions and unique visual resources which have been identified through field survey and community input. Design objectives and implementing policies are outlined on the pages following the discussion of existing conditions and resources.

EXISTING CONDITIONS

- **The Old City.** Nestled in the Sacramento Valley at the foot of the surrounding mountain slopes, Old Oroville, which an uninformed tourist may never find, has the quiet dignity and geometry of a Central Valley town. The grade-separated railroad tracks, the depot, and the five-story hotel proclaim its importance as an historic rail center at the foot of the Sierra. The large arching trees, Victorian homes and farm houses lend shade and character to the streets, and the small blocks and continuous street network offer a pedestrian-friendly environment. Presently, the Old City is a small portion of the larger urban area. Due to its small area, it is more of an historical district than the community center.
- **Feather River.** The Feather River flows from the Sierra Nevada to Lake Oroville, located within the foothills where the water is impounded. At Lake Oroville the water is released in controlled flows to meander through the Planning Area, giving Oroville the distinction of being among a select group of California cities to be bisected by a major, year-round river. River levees provide abrupt edges to this resource, and frequently prevent residents and visitors from seeing the river. However, the embankments also offer exciting recreational opportunities as the basis for an expanded bikeway and trails system.



Neighborhood streets and homes in the Downtown Oroville area lend character to the community and preserve the area's rich history.

- **Major bodies of water.** In addition to the Feather River, the Planning Area is favored with the cool blue expanses of Lake Oroville, the Thermalito Forebay and Afterbay, and the numerous smaller lakes of the Wildlife Refuge.
- **Oak studded foothills interspersed by olive and citrus orchards.** Oroville's foothills exemplify the California postcard landscape; golden hills dotted with dispersed oak woodlands, punctuated by an occasional residence, and accented by the denser foliage of small olive and citrus orchards. This semi-rural setting, seemingly far from Oroville, is where most new homes have been built during the last few years.
- **Absence of monotonous residential subdivisions.** The topography of the foothills and the small land holdings within the Valley have prevented development of large-scale tract home subdivisions that characterize much of urban California.

Objectives: City Design

- 4a Require quality design and materials for all projects.
- 4b Maintain a compact growth pattern for the subsequent development of the community by striving to locate new development proposals in locations that have support infrastructure currently in place, with suitable serviceability.
- 4c Strive to keep Oroville as seen from the freeway a city to be visited, enjoyed and admired.
- 4d Strive to make Oroville Dam Boulevard an interesting, appealing and inviting city street by encouraging the planting of trees and other landscape features from Larkin Road through the Olive Highway corridor.

Trees are essential to give major roadways a human scale and summer shade. Correspondingly, the addition of trees will enhance the visual appearance of the streetscape, and has the potential to create more opportunities for pedestrian traffic and thereby benefit local businesses. For implementing policies see Section 3.42.

- 4e Clarify the routes leading to downtown through the effective utilization of coordinated landscaping, plantings and distinctive street lighting.

The creation of a clearly defined path into Downtown Oroville will encourage and lead visitors into the heart of the historic district.



Oroville is fortunate to have numerous natural resources, such as the Feather River and Table Mountain, located within the Planning Area.

- 4f Encourage housing and accommodations on both sides of the Feather River adjoining Downtown. Strive to provide parks and attractions to the north river bank, on the private properties west of the Fish Hatchery.

The Feather River can be one of Oroville's most desirable high density residential locations and an excellent asset to the community. If its two sides were connected by a pedestrian bridge somewhere between Feather River Boulevard and Lincoln Street, both the apartment neighborhood and Downtown area would benefit. A riverfront promenade/park north of the Feather River would also be a tremendous resource for residents south of the river as well.

- 4g Encourage top floor residential uses in multi-story office buildings located within the downtown core.

- 4h Strive to locate parks on prominent sites cooperatively with the schools to maximize the public benefit from all sources of funding.

A cool, green park at a busy intersection can be the most powerful ingredient in the image of a Central Valley city. When properly located, parks can be a resource for both the general public and students during school hours. See also Objective 7.10b in the parks section of the Public Facilities and Services Element.

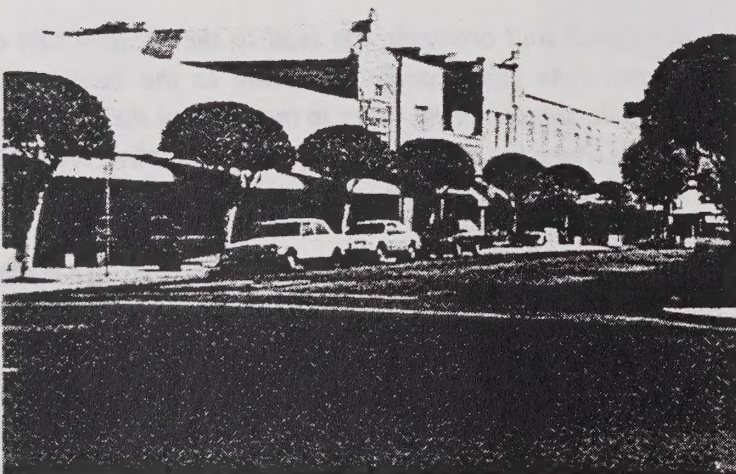
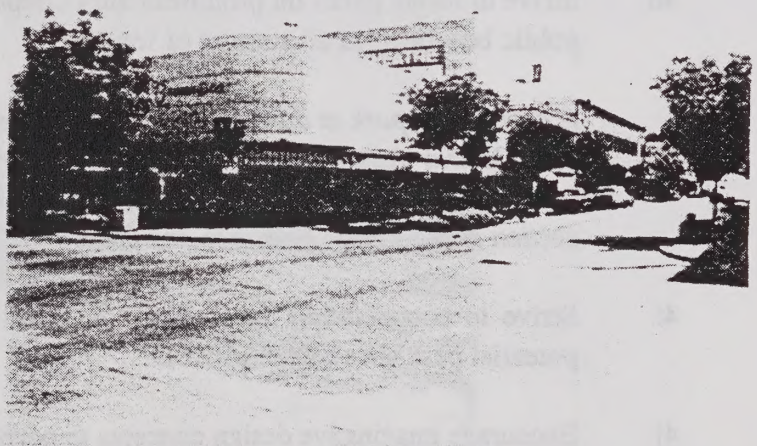
- 4i Strive to cooperatively locate park facilities at locations that have been identified as potential park sites by the FRRPD.

- 4j Encourage imaginative design concepts to perpetuate and preserve native woodlands and citrus and olive trees where feasible.

Unique designs incorporating woodlands and orchards can lead to the preservation of natural resources while at the same time significantly contribute to the increase of residential property values. Oak woodlands take many years to mature and their acreage is declining throughout California; the Planning Area's foothill citrus and olive orchards are unique. What is not preserved could be lost forever.

Low density designations, grading limitations, and density transfer provisions are means of preservation. Access to low cost water may be essential if orchards are to remain viable. See Policy 6.21c.

- 4k Explore the possibility of landscaping power transmission corridors with low-maintenance native plants, revenue producing crops, off-street parking, or potential undergrounding.



The placement of coordinated landscaping and street amenities in the Downtown Oroville area helps to clarify routes and lend to the area's sense of place.

The placement of olive tree groves within the right-of-way, with the exception of a maintenance road, would reduce the apparent size of the transmission towers, maintain the Planning Area's historic agricultural character, and support local processing. The University of California Cooperative Extension, Division of Agriculture and Natural Resources, publishes guidelines for selecting trees for power transmission corridors.

- 4l Explore the possibility of obtaining a 100% Federal Demonstration Grant, and work with property owners in the Western Pacific Addition Subdivision to create a housing development with adequate infrastructure that would be a model for imaginative design, low maintenance, visually pleasing, and inspirational housing.

- 4m Utilize Ruddy Creek as a multi-purpose natural element in Thermalito.

The creek's floodplain has remained open, but there is little riparian vegetation and it is not currently thought of as a landmark. A 1979 Master Drainage Plan proposes a 13-acre stormwater retention basin north of Tehama Avenue and a 40-foot wide channel. If properly landscaped with an adjoining pedestrian and bike trail, Ruddy Creek could be the centerpiece of Thermalito's open space system.

- 4n Encourage clustered lots, particularly in steep terrain or in heavily wooded areas where the General Plan designates Low or Very Low Density. Reduce improvement costs by transferring density from steep grounds and woodlands to clustered small lots that require less street and sewer frontage than large lots.

- 4o Design neighborhood shopping centers that can function as focal points and pedestrian precincts.

- 4p Highway 70 shall be developed as a landscaped corridor through the Oroville Community.

- 4q Strive to reduce land use compatibility problems between industrial and residentially designated properties along Lincoln Boulevard between Wyandotte Avenue and the south side of Ophir Road.

- 4r The City should strive to have appropriate landscaping installed along major arterials throughout the City. Specifically, Oroville Dam Boulevard, 20th Street/Larkin Road, Lincoln Boulevard, Grand and Nelson Avenues.

Implementing Policies: City Design

- 4s Strive to limit freeway-oriented signs. Combine freeway signs listing available accommodations and services, and allow only small identity signs on buildings adjoining the freeway.

See also Section 3.45: Highway Frontage

- 4t Establish design guidelines for all projects except single-family dwellings. These guidelines should include standards for the Downtown Area in terms of architectural style and materials needed to preserve and enhance the historic character of Downtown Oroville. Specific guidelines should also be established for application in the Airport Business Park addressing the types of building materials that will be permitted and enhanced landscaping standards that will be applied. A draft version of the guidelines shall be provided for public review and comment prior to adoption.

The Oroville Zoning Ordinance includes landscaping standards and requires Site Plan and Development Review for all construction except single-family dwellings. Design guidelines are needed to make the City's expectations clear to applicants before they design their projects. Without guidelines, many projects will be proposed that the sponsor knows would not be approved in communities with a strong history of design review. See also Policy 3.30n regarding residential design guidelines.

- 4u Encourage Butte County to adopt the City's Plan Diagram and development policies as part of the County's General Plan to ensure a compact pattern of growth.

The 84-square-mile Planning Area is nearly twice the size of the City of San Francisco and, if developed intensively, could potentially hold several hundred-thousand residents. If development during the period of buildout is scattered, perhaps extending beyond the Planning Area boundary and creating an Oroville-Chico corridor, Oroville's identity will erode.

- 4v Explore the possibility of providing for an "Historic Downtown Oroville" sign at Oroville Dam Boulevard and Myers Street and a gold dredge fountain at the Montgomery Street interchange.

This would improve Downtown visibility and City identity.

- 4w Study the feasibility of a pedestrian/bicycle bridge across the Feather River leading to Downtown.

The General Plan envisions the addition of approximately 1,100 residents in the area between the Feather River and Grand Avenue north of Downtown; more development is anticipated in the area north of Grand Avenue. Provision of a pedestrian/bicycle bridge will encourage development of housing opportunities across the river, and will serve to support Downtown. See also Policies 4f and 7.11d and Objective 5.40a.

- 4x Request the State to landscape and develop the Thermalito Afterbay as a destination water recreation park which defines the western boundary of the community in accordance with the State's original master plan of recreation development associated with the FERC permit.

Because the Afterbay's water level fluctuates only moderately, water sports are more reliable than at Lake Oroville. The first step in a program to transform the bleak setting should be planting of a forest of several hundred acres.

- 4y Encourage the efforts of the FRRPD in the North Forebay, Nelson Ballpark expansion and the development of the River Bend Park.
- 4z All residential developments which have rear yards of units adjacent to Oroville Dam Boulevard, 20th Street/Larkin Road, Table Mountain Boulevard, Lincoln Boulevard, Grand and Nelson Avenues, shall provide acceptable noise attenuation and screening. Acceptable methods of attenuation and screening include low maintenance solid walls (including masonry, slump stone, decorative concrete block, etc.) with vine covering and landscaped areas in front of the walls, between the wall and the arterial.
- 4z.1 In order to create a continuous and unified landscaped corridor along Highway 70, encourage private participation in the installation of screen type landscaping on private properties adjacent to the Highway which are not included within the State Highway 70 Landscaping Project.
- 4z.2 The installation of physical buffers, such as low maintenance solid masonry or decorative block walls and drought tolerant landscaping, shall be required as necessary in conjunction with the development of industrial or residential projects along Lincoln Boulevard (generally between Wyandotte Avenue and the south side of Ophir Road) where residential and industrial land uses may interface, or in other locations in the City where potentially conflicting land uses may be adjacent to one another.

5.0 CIRCULATION ELEMENT

5 CIRCULATION ELEMENT

The Circulation Element provides a framework to guide the growth of the Planning Area's transportation-related infrastructure over the next 20 years and a reference point for agreement between City and County policies. Also included in the Element are policies to enhance the efficiency of the existing circulation system, and policies related to the Oroville Municipal Airport, bikeways and transit. Policies for pedestrian trails are discussed within Section 7.11. Power transmission lines located within the Planning Area are discussed in Section 8.50.

The intent of the Circulation Element is to:

- identify the City's present and future transportation needs;
- describe the proposed circulation system;
- consider alternative modes of transportation other than the single occupant vehicle;
- establish policies which coordinate the circulation system with planned land uses and provide direction for future decision-making; and
- develop implementation strategies and identify funding sources to provide for the timely implementation of the Circulation Element's recommendations.

CONSISTENCY WITH STATE PLANNING LAW

Pursuant to Government Code Section 65302(b), a general plan is required to include:

"A circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and facilities, all correlated with the land use element of the plan."

This element has been prepared consistent with these requirements and all pertinent planning laws.

This element is closely integrated with the Land Use Element to ensure that the circulation system will adequately support and serve future development through implementation of the General Plan. The street and traffic improvements included in the Circulation Element are based on a 20 year time frame (2014), whereas a particular buildout year has not been established for the Land Use Element. This is due to the fact that a community can only estimate the approximate year of buildout due to fluctuations in the population growth rate from year to year. The Circulation Element will be reviewed and updated prior to 2014 to ensure that it adequately addresses community needs as they evolve over the next 20 years. According to the Governor's Office of Planning and Research, the Land Use and Circulation Elements should not be considered "inherently inconsistent" simply because they include differing time frames.

Additionally, this element is consistent with all other General Plan elements including the Housing and Safety Elements. Consistency with the Housing Element is needed to plan for the provision

of adequate sites for housing and the required street system to support the sites. Coordination with the Safety Element is also necessary in order to identify evacuation routes during community emergencies.

5.10 SERVICE AND IMPROVEMENT STANDARDS

Level of Service (LOS) is a qualitative measure of traffic service along a roadway or at an intersection. As described in Table 5.10-A, it ranges from A to F, with LOS A being best and LOS F being worst. LOS A, B and C indicate conditions where traffic can move relatively freely. LOS D describes conditions where delay is more noticeable and average travel speeds are low. LOS E indicates significant delays and average travel speeds of one-third the free-flow speed or lower. Finally, LOS F characterizes traffic flow at very slow speeds (stop-and-go), and long delays (more than one minute) with queuing at signalized intersections.

For compatibility with the Butte County Association of Governments' (BCAG) Congestion Management Program (CMP), the Plan establishes LOS standards for street segments. The BCAG CMP has adopted LOS D as its standard, but recognizes that individual cities may choose a higher level.

**TABLE 5.10-A
LEVEL OF SERVICE DEFINITIONS**

Level of Service (LOS)	Traffic Flow Conditions	Maximum Volume to Capacity Ratio
A	Conditions of free flow; speed is controlled by driver's desires, stipulated speed limits, or physical roadway conditions.	0.6
B	Conditions of stable flow; operating speeds beginning to be restricted; little or no restrictions on maneuverability from other vehicles.	0.7
C	Conditions of stable flow; speeds and maneuverability more closely restricted; occasional backups behind left-turning vehicles at intersections.	0.8
D	Conditions approach unstable flow; tolerable speeds can be maintained but temporary restrictions may cause extensive delays; little freedom to maneuver; comfort and convenience low; at intersection, some motorists, especially those making left turns, may wait through one or more signal changes.	0.9
E	Conditions approach capacity; unstable flow with stoppages of momentary duration; maneuverability severely limited.	1

**TABLE 5.10-A
LEVEL OF SERVICE DEFINITIONS**

Level of Service (LOS)	Traffic Flow Conditions	Maximum Volume to Capacity Ratio
F	Forced flow conditions; stoppages for long periods; low operating speeds.	> 1.00

Sources: Blayney Dyett Greenberg; Dowling Associates.

GENERAL PLAN TRAFFIC IMPACT ANALYSIS METHODOLOGY

BUTTE COUNTY ASSOCIATION OF GOVERNMENTS (BCAG) TRAFFIC MODEL

Concurrent with the preparation of this General Plan, BCAG, with the aid of a subcontractor, prepared a travel forecasting model covering the Greater Oroville area. The model was prepared to aid the City and County in preparing the Congestion Management Program (CMP), in responding to air quality legislation, and to aid the City in its short and long-range planning efforts. The model included an area somewhat larger than the General Plan Planning Area, though the traffic zone boundaries of the model were designed to conform to the Planning Area boundary. Details of the model are included in the report *Oroville Area Transportation Model*, November 1991, published by BCAG.

ANALYSIS METHODOLOGY

Due to the type of modeling data available, the Plan evaluation was performed at the "street segment" level of detail. Generally, for a Circulation Element, a traffic service-level evaluation is done at the intersection level. However, reliable data required for such an analysis was not available at the time of this update. This type of detailed analysis is anticipated to take place on a project specific basis.

State CMP legislation requires that service level evaluation be done using either the Highway Capacity Manual (HCM) or the Circular 212 method of evaluation. The HCM method for segments in an urban area requires data on travel time. This data was not available. In its place, the more time-honored and traditionally used analysis method for a General Plan Circulation Element, a volume/capacity type of analysis was used. This method of analysis compares the projected volumes to the capacities.

The BCAG model was conducted using data representing the best estimate of existing land uses prepared by the consulting team. Discrepancies between the land use estimates of the BCAG subcontractor and the General Plan consulting team were noticed while preparing the model. To alleviate this problem, joint decisions and adjustments were made to reflect the best information available. Some of these adjustments are described below. The BCAG model was also run using the General Plan buildout

land use data in addition to the circulation improvements incorporated in the General Plan and described in Table 5.20-C.

TRAFFIC ANALYSIS

The BCAG 1992 travel forecasting model was used to assess existing conditions and evaluate improvements needed to accommodate buildout of the proposed General Plan. In order to calculate the travel demands which the proposed General Plan will have on the circulation system, the analysis used estimates of the Plan's land use buildout conditions. A comparison of travel demand to available capacity was then completed to determine projected service levels at different locations.

The comparison of the resulting assignment of trips to the network for the BCAG baseline (calibration) model and the General Plan consulting team's estimate of the existing land use suggests very little difference between the two. The only exceptions being Oroville Dam Boulevard and one segment of Olive Highway. For some street segments, the new forecast for existing traffic was slightly higher, and in other cases, it was slightly lower. However, the differences are not large. In the extreme case, Oroville Dam Boulevard between 5th and Lincoln, the calibration volume was 1,130 peak hour trips eastbound. Whereas, for the General Plan consulting team's existing land use table, the volume was 1,340. This is a difference of 19 percent.

There is little difference between results of the calibration run and the General Plan consulting team estimated existing land use run. However, when one compares results of the existing land use data to those of the General Plan buildout, there are clear differences. This means that the model is able to discriminate between different land use quantities. The conclusion is that the model can be used to evaluate the buildout scenario for the General Plan using results of the General Plan consulting team's existing land use estimate as a baseline condition. The only exception made in developing the final forecasts was to reduce the growth in traffic on Oroville Dam Boulevard by 15 percent to account for the differences between the calibration and the General Plan consulting team existing land use data base.

For evaluation, segment capacities for different street types, as described in Table 5.10-B, were used. The ratio of estimated or projected volume on a street segment to its capacity is considered the volume to capacity ratio. Table 5.10-A shows the relationship between the maximum volume to capacity ratios and levels of service.

**TABLE 5.10-B
DAILY AND PEAK HOUR CAPACITIES FOR SELECTED FACILITY TYPES
IN OROVILLE**

Facility Type	Daily Capacity (number of trips)	Peak Hour Capacity (number of trips)
4-Lane Freeway	70,000	4,000
6-Lane Divided Arterial	40,000	2,400
4-Lane Divided Arterial	27,000	1,620
2-Lane Divided Arterial	15,000	900
4-Lane Undivided Arterial	24,000	1,440
2-Lane Undivided Arterial	12,000	720
3-Lane One-Way Arterial	22,000	2,200
2-Lane One-Way Arterial	15,000	1,500
4-Lane Divided Collector	20,000	1,200
2-Lane Divided Collector	10,000	600
4-Lane Undivided Collector	18,000	1,080
2-Lane Undivided Collector	9,000	540

EXISTING TRAFFIC CONDITIONS

A report produced as a result of the BCAG modelling effort (*Oroville Area Transportation Planning Model*, Butte County Association of Governments, November 1991) contains an evaluation of existing conditions and a summary of the model calibrated to base year 1990.

Existing Volumes. Estimated existing peak hour traffic volumes for street segments, using the General Plan consulting team's existing land use estimates, are displayed in GP Figures 5.10-A through 5.10-F. The number of lanes per direction for street segments are illustrated in GP Figures 5.10-D and GP Figure 5.10-E. The State highways are the major traffic carriers within the Planning Area. State Route 162 carries about 2,500 vehicles (two-directional) during the P.M. peak hour at it highest volume location, between Feather River Boulevard and Lincoln Street. P.M. peak hour volumes are estimated to be approximately 2,000 and 900 for State Route 70 and State Route 99 respectively.

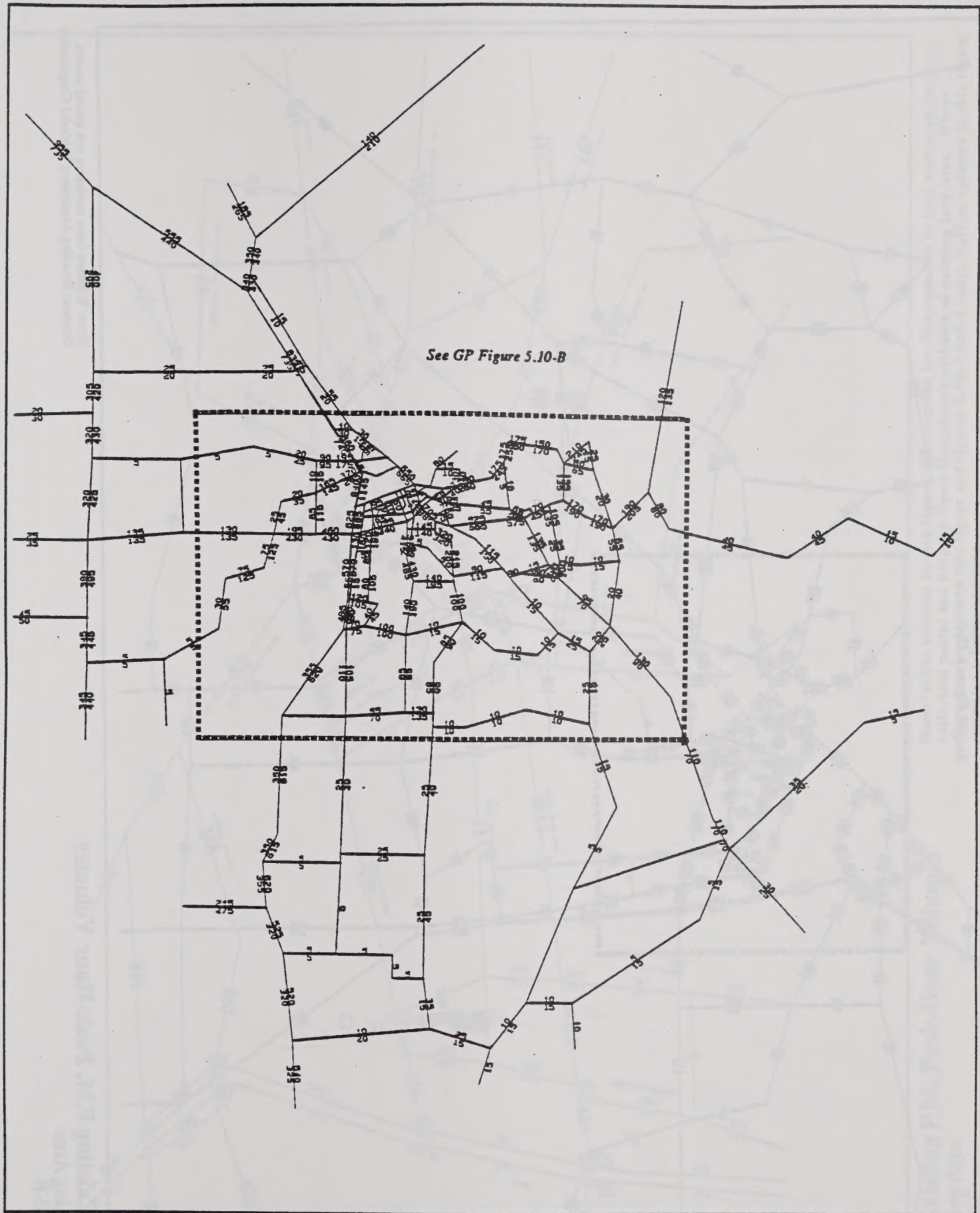
Estimates of existing traffic indicate that street operations in Oroville are generally excellent. However, four locations where the operational LOS is D or E are identified (see GP Figure 5.10-F):

- Oroville Dam Boulevard between SR 70 and Olive Highway, currently operating at LOS D, is the most significant potential problem area. There are eight traffic signals in this segment, several of which are approaching capacity. Oroville Dam Boulevard is the most important highway in Oroville because a large percentage of all trips in the Planning Area must either use it to reach other streets or major traffic generators that border it, or use or cross it in the course of traveling between origins and destinations inside and outside of the Planning Area. Increasing intensity of commercial development will add to potential capacity problems in the near future. The large number of driveways with direct access to Oroville Dam Boulevard reduce its capacity. Review of similar conditions in other cities indicates that a large number of driveways can effectively absorb the capacity of the curb lane, particularly when the driveways serve high volumes of commercial traffic.
- Olive Highway between Foothill Boulevard and Oroville Dam Boulevard is currently operating at LOS E. Field observations indicate that significant congestion occurs during peak hours, and that turning movements are difficult for drivers exiting commercial driveways, particularly if they are trying to turn left.
- The three-lane segment of Table Mountain Boulevard north of the Feather River is currently operating at LOS E.
- Olive Highway, immediately east of Foothill Boulevard, is operating at LOS D.

EXISTING IMPROVEMENT PROGRAMS

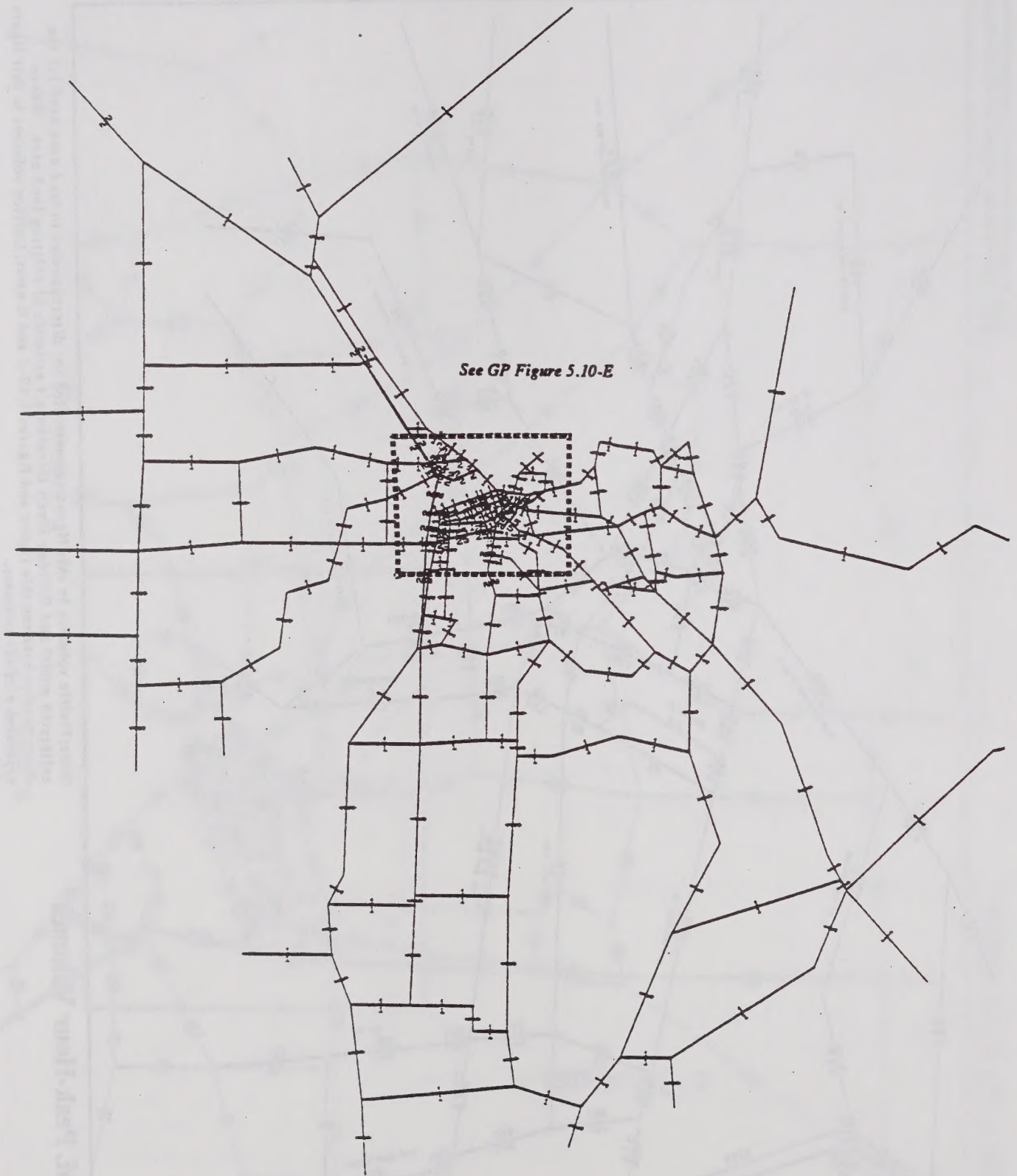
State Route 162. The State Route 162 Alternatives Study (Fehr & Peers Associates, July 1994) was recently prepared for BCAG analyzing alternative alignments for a future east-west roadway through Oroville. This proposed roadway is intended to alleviate future congestion on Oroville Dam Boulevard which is projected to reach LOS F by General Plan buildout. Three roadway alignments were analyzed including concerns such as construction and right-of-way costs, impacts on surrounding neighborhoods, projected traffic volumes and levels of service.

The preferred alignment recommended by the consultant would start at Feather River Boulevard, use Cal Oak Road to its eastern terminus and would continue to the Lincoln Boulevard/Myers Street intersection. The alignment would then go 800 to 1000 feet south of Ithaca Street, around the residential neighborhood, and traverse northeast from Oroville-Bangor Highway to Olive Highway. This alternative was recommended over the other two, in large part, because it completely circumvents an existing residential neighborhood. Additionally, this roadway would have little impact on existing



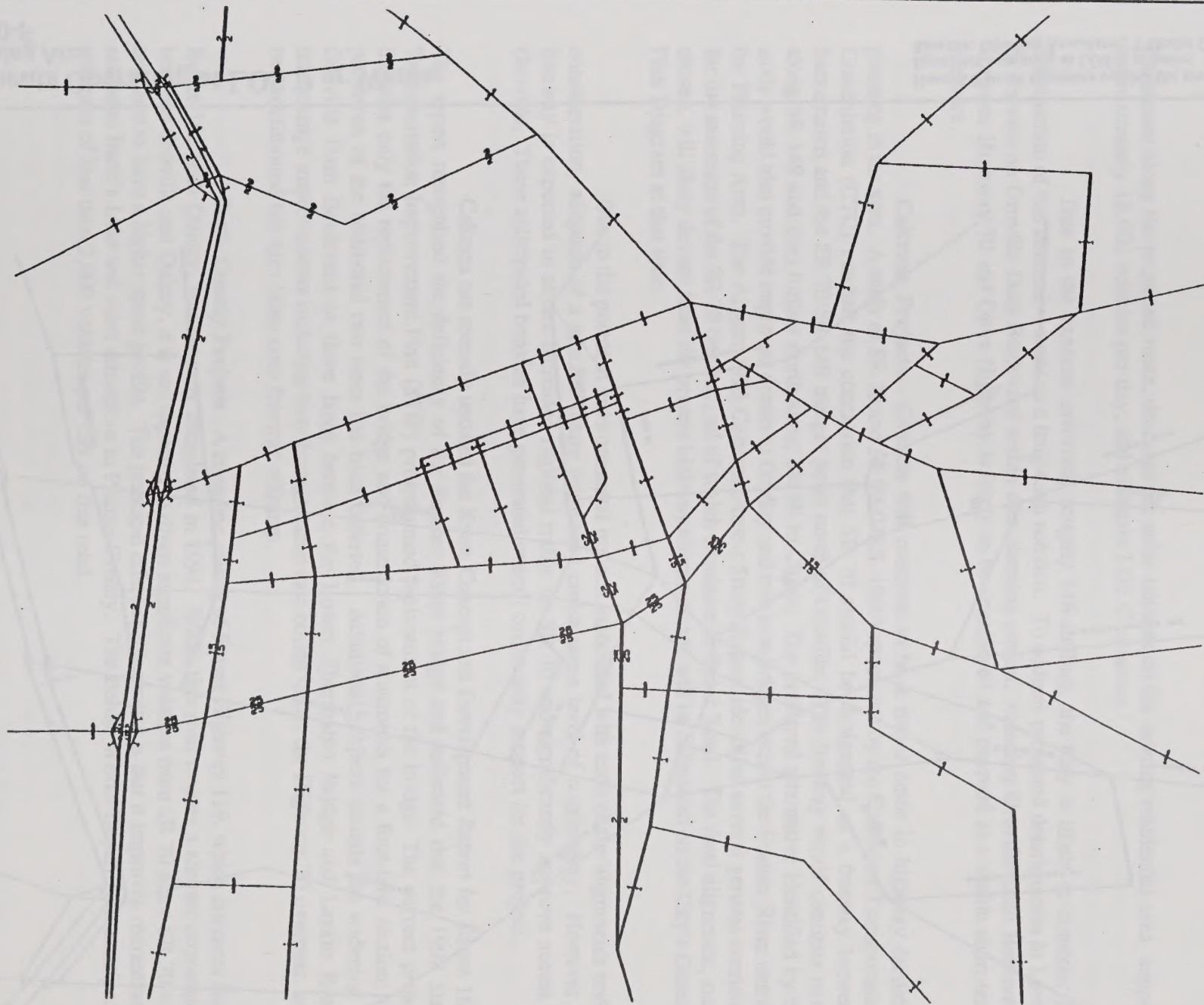
Estimated Existing P.M. Peak-Hour Volumes
 Oroville Planning Area
 GP Figure 5.10-A

Note: Volumes from modeling not actual counts.
 Sources: Dowling Associates; T-Model Corporation



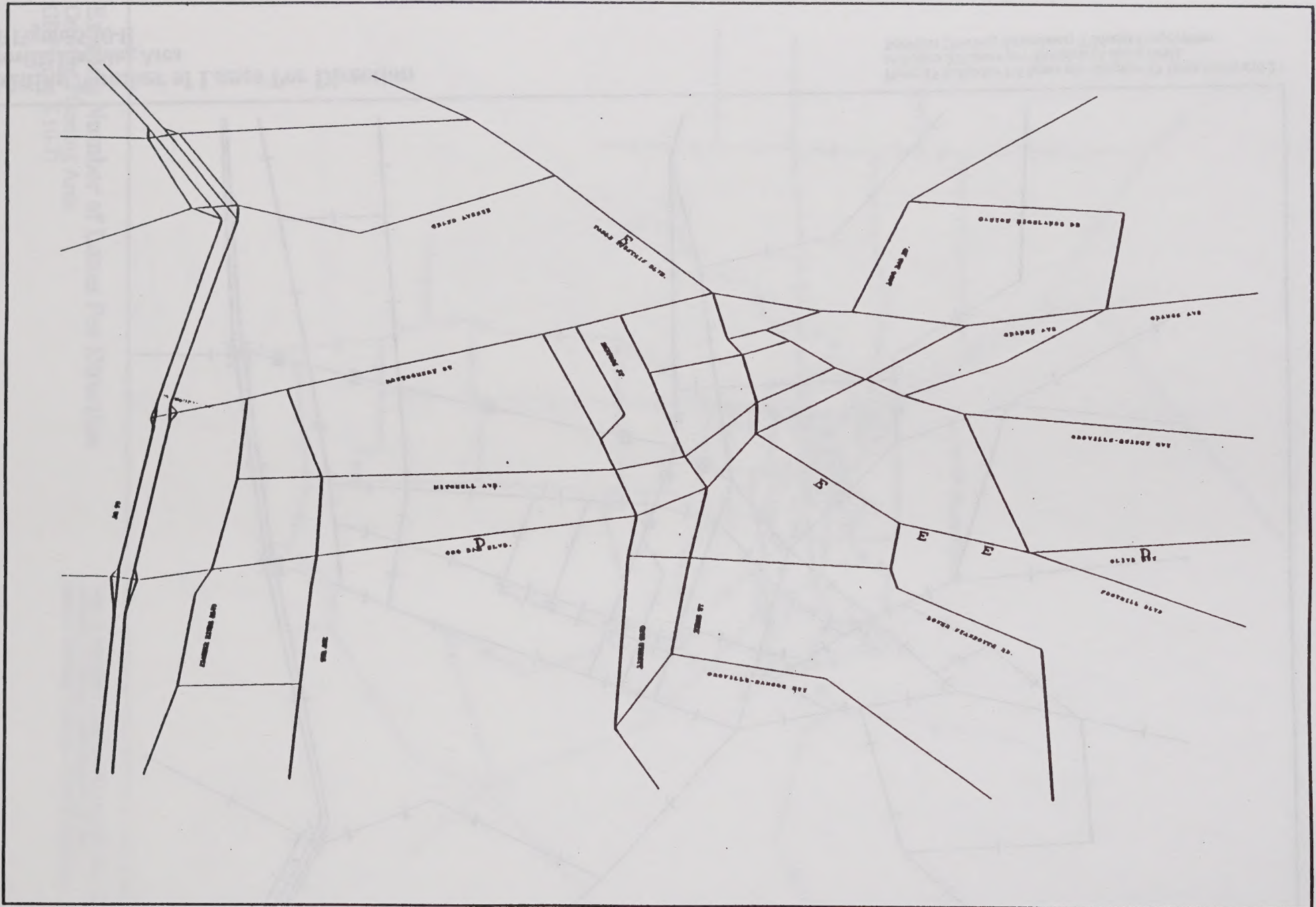
Existing Number of Lanes Per Direction
Oroville Planning Area
GP Figure 5.10-D

Note: 15 indicates 1.5 lanes per direction (3 lanes total) and 25 indicates 2.5 lanes per direction (5 lanes total).
Sources: Dowling Associates; T-Model Corporation



Existing Number of Lanes Per Direction
Oroville Planning Area
GP Figure 5.10-E

Note: 15 indicates 1.5 lanes per direction (3 lanes total) and 25 indicates 2.5 lanes per direction (5 lanes total).
Sources: Dowling Associates; T-Model Corporation



Street Segments Operating at LOS D or Worse
 Oroville Planning Area
 GP Figure 5.10-F

Note: All street segments outside the area depicted on this figure are operating at LOS C or better.
 Sources: Dowling Associates; T-Model Corporation

businesses along the proposed route, decrease the noise impacts on the existing residential area, support approximately 18,000 vehicles per day, and maintain LOS C or better.

Due to the expense involved, roughly \$16 million, the City is likely to consider the construction of this alternative route as a long-term solution. To address projected deterioration in Levels of Service on Oroville Dam Boulevard within this planning period, widening Oroville Dam Boulevard between Highway 70 and Olive Highway is likely to be considered and pursued as a viable short-term measure.

Caltrans Projects. Caltrans will continue to be a major actor in highway facilities planning in the area. A study of SR 70 and SR 99 (DKS, 1990) sponsored by the California Transportation Commission (CTC) reached the conclusion that SR 70 should be designated as a freeway between Sacramento and the SR 70/SR 149 merger point north of Oroville. The freeway would continue north along SR 149 and then further north along SR 99 to Chico. The preferred alternative identified by the study would also provide improved access to Gridley and two new bridges across the Feather River outside the Planning Area. The August 1993 Caltrans Project Study Report identified several general corridors for the extension of the SR 70 freeway, all of which terminate at Ophir Road. The final alignment, once chosen, will likely deviate from the present highway alignment and will be delineated on the City's General Plan Diagram at that time.

Due to the potential environmental impacts associated with each of the alignments under consideration, adoption of a specific future route may create some level of controversy. However, a freeway is expected to attract increased regional traffic on SR 70 and significantly improve access to Oroville. These anticipated benefits have generated overall community support for the project.

Caltrans has recently updated the Route Concept and Development Report for Route 162. The report recognized the deficiency of the Feather River bridge and indicated that the 1990 State Transportation Improvement Plan (STIP) programmed replacement of the bridge. The current project includes only the replacement of the bridge and construction of abutments for a four-lane section; the provision of the additional two lanes has been deferred. Additional projects include the widening of Oroville Dam Boulevard to three lanes between the Lower Thermalito Bridge and Larkin Road, interchange improvements including two through lanes east bound under the Highway 70 overpass, and two southbound left turn lanes onto freeway offramp.

Butte County Project. A complete paving of Forest Highway 119, which connects State Route 162 with Quincy, was recently completed in 1994. While this road creates a shorter connection between Oroville and Quincy, it is not expected to divert significant volumes from SR 70 since SR 70 will continue to have a higher speed profile. The principal effect of this project is that it improves recreational access to Buck's Lake and other attractions in Plumas County. The Public Works Department anticipates volumes of less than 2,000 vehicles per day on this road.

City of Oroville. The City of Oroville maintains a five-year Capital Improvement Program (CIP) that represents its current best thinking on projects needed in the short term. Implementation is dependent on funding availability for the current fiscal year. CIP projects are prioritized into four categories, based on a combination of need and funding availability:

- Priority 1 includes projects that are needed immediately or where special funding is available. These projects are typically placed on the Public Works Department budget request.
- Priority 2 includes projects needed within two or three years or which have special funding available.
- Priority 3 includes projects needed within the five-year period of the program.
- Priority 4 includes projects needed beyond the five-year funding period.

The following is a listing, by priority, of those projects in the current CIP which can be expected to add capacity to the existing highway system.

PRIORITY 2 PROJECTS

- Intersection improvement at Foothill Boulevard/Edgewood Drive.
- Intersection improvement at Oroville Quincy Highway/Canyon Highlands Drive.
- Mitchell Avenue widening between Washington Avenue and Bridge Street.

PRIORITY 3 PROJECTS

- Widen Table Mountain Boulevard between Grand Avenue and Upper Thermalito Bridge.
- Widen Table Mountain Boulevard to four lanes between Nelson Avenue and County Center Drive.

PRIORITY 4 PROJECTS

- When LOS C deteriorates on Washington Avenue, capacity improvements shall be installed or alternate routes shall be established that will re-route traffic and re-establish a LOS C on Washington Avenue between Montgomery Street and Oroville Dam Boulevard.

Objectives: Service and Improvement Standards

- 5.10a The City shall work with the Butte County Association of Governments to provide for consistent assumptions and projected traffic volumes as related to the City of Oroville.
- 5.10b The City will work to quantify the projected effects of the relief roadway facilities as presented above on the levels of service at controlling intersections throughout the study area.
- 5.10c Adopt Level of Service standards for various sectors of the Planning Area, to be used in evaluating the probable impacts of development proposals and to project the efficiency of proposed mitigating improvements.
- 5.10d Monitor the levels of service at various key control points for the purpose of providing ongoing calibration of the computer projections and maintain continuing forecasts of acceptable service standards for all arterial and collector streets. Budget improvements required to meet the community adopted standards unless the improvement would create unacceptable disruption or displacement or require an unacceptable level of public expenditure.

Implementing Policies: Service and Improvement Standards

- 5.10e Strive to maintain LOS C for all arterial and collector streets except the following, where LOS D should be maintained:
 - Table Mountain Boulevard between the Feather River and Grand Avenue;
 - Oroville-Quincy Highway east of Oroville Dam Boulevard; and
 - Orange Avenue east of Oroville Dam Boulevard.

Forecasts from the BCAG traffic forecasting model indicate that all areas of the City, other than the above, can be mitigated to achieve LOS C. The forecasts indicate that all of the above can be mitigated to LOS D. The costs and impacts associated with mitigating the above list to LOS C are considered unreasonable, and a service level standard of D is thus established for these locations. The Butte County CMP recommends maintenance of LOS D for all major streets in the County.

- 5.10f Establish an ongoing program to identify streets and intersections with unacceptable levels of service and implement a program to upgrade them.
- 5.10g Establish intersection service-level standards when intersection traffic data becomes available.

- 5.10h Design roadway improvements and evaluate development projects using LOS criteria prescribed in Policy 5.10c.
- 5.10i Monitor traffic service levels and implement Circulation Element improvements prior to deterioration in levels of service to below the stated standard, unless the City Council finds justification for accepting a lower level of service.

Development approvals should require demonstration that traffic improvements necessary to serve the development, without violating the standard, will be in place to accommodate trips generated by the project.

5.20 STREET CLASSIFICATION AND NETWORK

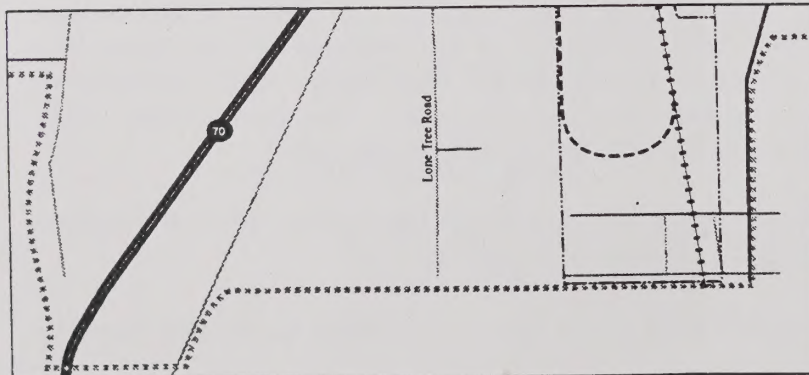
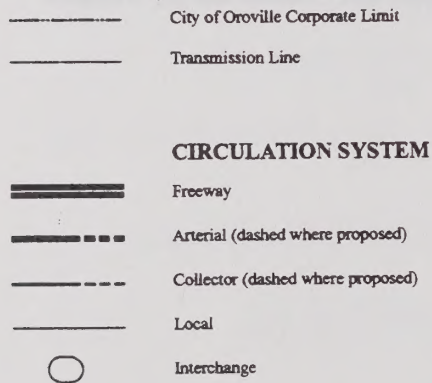
CLASSIFICATION

The circulation network in the General Plan Diagram identifies the functional classification of key routes and distinguishes them as existing or planned alignments. A route's design, including the number of lanes needed, is determined both by its classification and the projected traffic volumes on the street. The classifications are discussed in Table 5.20-A.

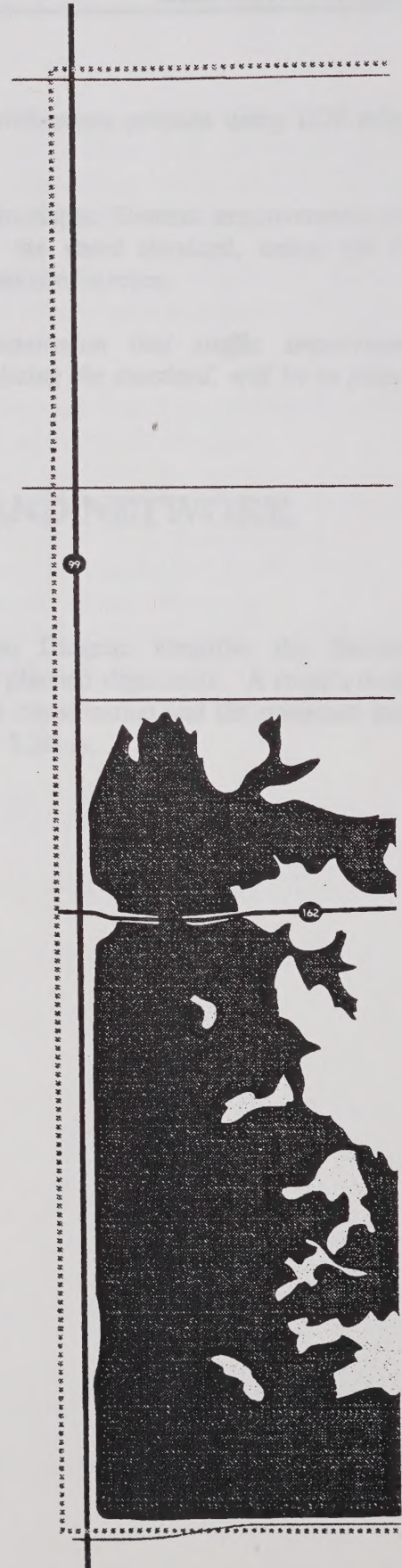
OROVILLE PLANNING AREA

Street Network

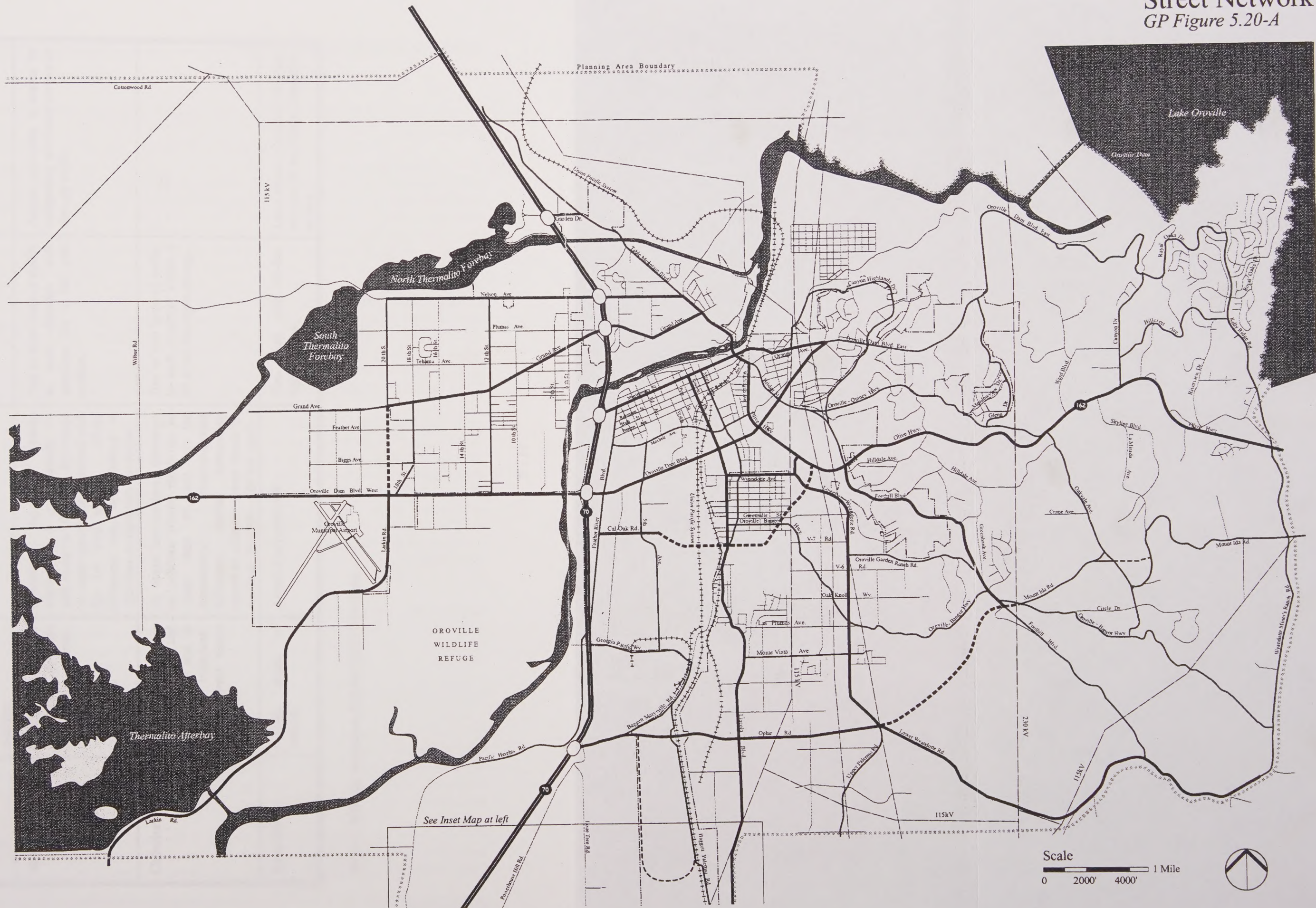
GP Figure 5.20-A



Southern extension of Planning Area



Street Network
GP Figure 5.20-A



**TABLE 5.20-A
STREET CLASSIFICATIONS**

Street Type	Function	Access	Right-of-Way	Discussion
Freeway	Provides for intra- and inter-regional mobility.	Restricted to primary arterials via interchanges.	Varies.	Includes portions of State Route 70.
Arterials	Collect and distribute traffic from freeways to collector streets, and vice versa.	Optimum distance between intersections is approximately 1/4 mile except in Old City. Driveways to major generators permitted with the 1/4 mile spacing. Minor driveways may be restricted to right-turn-in-right-turn-out access.	One to three lanes of traffic in each direction with provision for a left turn median.	Access restriction is crucial to maintaining maximum service to through traffic.
Collectors	Serve as connectors between local and arterial streets and, in some instances, provide direct access to parcels.	At major intersections, driveways on collector streets should be no closer than 50 feet to the intersection. Non-residential driveways and/or intersecting streets or collector streets should be no closer than 300 - 400 feet apart.	One or two lanes of traffic in each direction within a 60 or 84 foot right-of-way.	
Local Streets	Provide access to parcels.	Access is not restricted.	Two lanes with 60-foot rights-of-way.	Local streets constitute the largest part of the City's circulation system.

Source: Dowling Associates; Blayney Dyett Greenberg.

EXISTING STREET CLASSIFICATIONS

The street system is categorized into four classes: freeways, arterials, collectors, and local. Arterials are major streets carrying the traffic of local and collector streets to and from freeways and other major streets. Arterials serve long-distance trips. Collectors move traffic between local streets and arterials. Local streets are those that provide direct access to properties and are designed to discourage through traffic.

Categorizing streets is important to many aspects of future planning due to specific development criteria which may be attached to each classification. The City may develop design standards for road improvement and development; dedications and improvements may be required of developers as a condition of project approval; the City can prepare an improvement priority list for each classification; requirements for the control of access can be developed for various types of classifications; and, location criteria may be developed for public and private development.

The preparation and implementation of standards for each classification will reduce future problems associated with traffic speed, volume, access, travel times, and safety.

Major Arteries. The major north-south transportation artery is State Highway 70. State Highway 70 has been upgraded to four lanes from north of Georgia Pacific Way to the junction of State Route 149 and functions as a freeway. There are four above grade off-ramps into Oroville from State Highway 70; at Oroville Dam Boulevard, Montgomery Street, Grand Avenue/Nelson Avenue and Garden Drive. The off-ramp at Grand Avenue is for north bound traffic only, and the on-ramp for south bound traffic only. The off-ramp at Nelson Avenue is for south bound traffic only and the on-ramp for north bound traffic only. The existing level of service is good. However, during peak traffic hours, there is a congestion problem where State Highway 70 intersects Nelson and Grand at the on and off-ramps.

There are two acceleration and deceleration lanes south of Oroville at George Pacific Way and Ophir Road. The Georgia Pacific Way entrance and exit are adequate at this time. However, as the industrial base expands and truck movements increase, this site will need to be improved. An increase in traffic on Ophir Road is also expected after the completion of the proposed Ophir Road extension east of Lincoln Boulevard. Ophir Road is the proposed location for a major new interchange if Highway 70 is widened in the future. This proposed interchange will help alleviate expected increases in traffic volume.

Montgomery Street and Oroville Dam Boulevard are the major east-west arterials serving Oroville south of the Feather River. The historic core area of Oroville is served by a grid street system. Lincoln Street and Huntoon Street are two lane arterials forming a north-south one-way couplet through old Oroville. Myers Street is also a north-south collector serving the downtown area and South Oroville.

The reconstruction of the Table Mountain Bridge and the Washington-Bridge Street intersection has facilitated north-south traffic flow through the eastern portion of Oroville. The new construction has also simplified access to the eastern portions of the planning area by providing safer

movement of recreational vehicles, boats and trucks. The existing daily traffic count, in excess of 10,000 vehicles per day, is one of the highest in the City, primarily due to the county employee traffic traveling to and from the County Administrative Center on Nelson Avenue.

In addition to the major State Highway 70 bridge crossing the Feather River, there is a bridge on Oroville Dam Boulevard just west of State Highway 70, referred to as the Lower Thermalito Bridge. The Lower Thermalito Bridge will need to be widened within the next ten years. As presently constructed, the bridge is too narrow to safely transport the volume of trucks, buses, and larger vehicles that must travel east-west on Oroville Dam Boulevard. The bridge area is the site of several accidents per year.

The 1983 General Plan recommended that the Lincoln and Huntoon Streets couplet be extended north across the river to Grand Avenue via a fourth bridge. This crossing would better connect the County Center, downtown and the Oroville Dam Boulevard commercial area and was proposed at that time because traffic on Table Mountain Boulevard Bridge had approached design capacity. The recent replacement and widening of that bridge to four lanes resulted in a 1981 decision by the City Council to take no further action on plans for the Lincoln Street Bridge.

Street Categories. Table 5.20-B shows the streets within Oroville which have been classified by the City of Oroville Planning Department.

**TABLE 5.20-B
STREET CATEGORIES**

Arterials	Collectors	
Bridge Street Foothill Boulevard Forbestown Road Grand Avenue Huntoon Street Larkin Road Lincoln Street Lincoln Boulevard Lower Wyandotte Road Montgomery Street Nelson Avenue Ophir Road Orange Avenue Oro Dam Boulevard East State Highway 162 State Highway 70 Table Mountain Boulevard Washington Avenue Wyandotte Miners Ranch Road	10th Street 12th Street 14th Street 16th Street 18th Street 20th Street 5th Avenue 6th Street Acacia Avenue Arbol Avenue Arroyo Drive Baggett Marysville Road Baldwin Avenue Biggs Avenue Brookdale Drive Cal Oak Drive Canyon Drive Cherokee Road County Center Drive Edgewood Drive Feather Avenue Feather River boulevard Fogg Avenue Georgia Pacific Way Glen Drive Greenbrier Drive Grove Street Heritage Road Highlands Boulevard Hildale Avenue Hillcrest Avenue	La Mirada Avenue Las Plumas Avenue Lodgeview Drive Lone Tree Road Long Bar Road Meadowview Drive Mitchell Avenue Monte Vista Avenue Mt. Ida Road Myers Street Oakvale Avenue Olive Highway (Old) Oro Garden Ranch Road Oro Bangor Highway Oro Quincy Highway Pacific Heights Road Pine Street Plumas Avenue Pomona Avenue Riverview Drive Royal Oaks Drive Skyline Boulevard Spencer Avenue Stanford Avenue Tehama Avenue Thermalito Avenue Veatch Street Via Canela Ward Boulevard Wyandotte Avenue Yard Street

EVALUATION AND IMPROVEMENTS NEEDED

Improvements needed to serve anticipated growth are based on the traffic forecasting model prepared for the Butte County Association of Governments (BCAG). A full description of the methodology and results can be found in the General Plan EIR.

For the most part, the Planning Area's road system will adequately serve the anticipated needs of its residents as well as the significant volumes expected to pass through the Planning Area. Improvement projects that will be needed to satisfy the service-level standards are

identified in Table 5.20-C.

Objectives: Street Classification and Network

- 5.20a Encourage safe and efficient vehicular movement throughout the Planning Area.
- 5.20b Identify, schedule, and implement roadway improvements as development is approved and occurs in the future; evaluate future development and roadway improvement plans against standards for the classifications. The General Plan Diagram and Tables 5.20-A and 5.20-C should be used as a general guide for this evaluation.
- 5.20c Make efficient use of existing transportation facilities, changing technologies and funding opportunities as they become available and are feasible for the City.
- 5.20d To ensure consistency between local and regional actions, coordinate local actions with State and County agencies.
- 5.20e Through layout of land uses and provision of more direct routes, reduce the total vehicle miles traveled.
- 5.20f Equitably distribute the local cost of street and other traffic improvements between existing and new development, and residents and businesses in relation to the benefit being derived.

The projects in Table 5-20-C, if implemented, are intended to improve the level of operations of the City's circulation to the extent feasible and practical. If the projects identified in Table 5.20-C are not implemented it is anticipated that with buildout of the uses indicated on the General Plan Diagram, and with no changes to the existing circulation system, the result would be LOS E or F in a number of locations.

**TABLE 5.20-C
SUMMARY OF PROPOSED IMPROVEMENT PROJECTS**

Project	Description
Ophir Road Extension	Included in the unincorporated part of the Planning Area, this arterial street would provide two lanes between Lower Wyandotte Road and Foothill Boulevard.
Olive Highway from Oroville Dam Boulevard to Foothill Boulevard	This street would be widened to become a four-lane arterial with left turn median lane; double left turn lanes should be constructed at key intersections.

**TABLE 5.20-C
SUMMARY OF PROPOSED IMPROVEMENT PROJECTS**

Project	Description
Olive Highway east of Foothill Boulevard	Currently a two lane arterial, ideally would be widened to four lanes between Foothill Boulevard and Kelly Ridge Road. At a minimum shoulder widening, turn outs and acceleration lanes should be constructed in conjunction with future development to maintain desired Levels of Service.
Feather River Boulevard from Mitchell Avenue to Georgia Pacific Way	This street should be designated as an arterial and its cross-section should provide for four lanes plus a left turn median lane
Washington Street between Montgomery Street and Oroville Dam Boulevard	Maintain LOS C. When LOS C deteriorates, capacity improvements shall be installed or alternate routes shall be established that will re-route traffic and re-establish a LOS C on Washington Avenue.
Table Mountain Boulevard	The three lane segment between the Feather River and Grand Avenue should be widened to four lanes.
Grand Avenue at SR 70	The bridge over SR 70 should be widened to four lanes when the service level deteriorates to below LOS C.
20th Street between Grand Avenue and SR 162	A three-lane arterial should be established in this corridor, replacing 18th Street as the main North-South arterial in this area.
SR 70 south of Georgia Pacific Way	This portion of SR 70 will be converted to freeway design by Caltrans in accordance with their programming plans.
SR 162 west of SR 70	A portion of this highway will ultimately require widening to four lanes. The western boundary of the widening project should be determined by further study.

Source: Dowling Associates.

Implementing Policies: Street Classification and Network

Regional Cooperation

5.20g Coordinate with the work products of Butte County and the State of California Department of Transportation to:

- establish the General Plan classification system and street network as policy in the Greater Oroville area;
- ensure that street alignments, and right-of-way and access standards in the unincorporated area are consistent with the Greater Oroville urban area General Plan;
- require, where the terrain is appropriate, the building of sidewalks, curbs, gutters, and street lighting to urban standards as a condition of subdivision and development approval in the Planning Area.

The County is currently reviewing several subdivision proposals in different parts of the Planning Area. These should not be approved without ensuring development at urban standards.

Street Classification and Network

5.20h Establish and acquire rights-of-way easements along all designated freeways, arterial and major collector streets to preserve rights-of-way for designated roadway facilities.

5.20i Build all streets to classifications stipulated in Table 5.20-A.

5.20j Establish a program to assess and implement improvements to existing streets designated as arterial or collector on the General Plan Diagram, to bring them to the adopted standards. Incorporate needed improvements within the City boundary in the CIP.

Cooperation with Butte County will be needed for improvements in the Planning Area outside the City.

5.20k Establish review procedures to ensure that access standards on arterial and collector streets are maintained as development proceeds and that improvements to the circulation system required to maintain standards take place concurrently with development that requires facility improvements.

5.20l City shall continue efforts to improve transportation efficiencies as related to Oroville Dam Boulevard which may include studies for locating a new east-west arterial, improvements to enhance roadway capacity, or other financially feasible alternatives.

Financing

- 5.20m Establish a development fee program to equitably assess property owners their appropriate fair share of costs to mitigate impacts generated as a result of developments.
- 5.20n Periodically review the availability of non-local funding sources and pursue those sources aggressively in support of the roadway improvement process and alternative transportation projects.
- 5.20o Coordinate with all utility service providers when planning highway and street improvements which may impact existing utility facilities within or adjacent to their rights-of-way.

5.30 TRANSIT AND TRANSPORTATION SYSTEMS MANAGEMENT

The term Transportation Systems Management (TSM) refers to measures designed to reduce peak-hour auto traffic by making more efficient use of existing resources, and emphasizing transit, ridesharing and non-automobile alternatives.

Public transit in the Oroville area has been in operation since 1976. Ridership consists principally of the elderly and others primarily dependent on transit. In 1991, about 85 percent of the Oroville Express riders and 90 percent of the Oroville Area Transit riders did not have an auto available to make trips made by transit. Operating costs of the services are supported by local transportation funds and farebox revenues. The Urban Mass Transportation Association supports some of the capital costs.

OROVILLE AREA TRANSIT

Policy direction to the transit systems is provided by the Oroville City Council and the Butte County Board of Supervisors, and the services are operated by a private operator, ATC/Vanco Inc. Transit management, contract administration, and marketing of the Oroville area transit systems is provided by the Transportation Systems Specialist of the Butte County Department of Public Works.

Oroville Express. The Oroville Express, a ticket-based dial-a-ride service for the elderly and the disabled, has been in operation in the Oroville area since 1976. An overwhelming majority of riders use the system for shopping, personal business, or medical trips.

Oroville Area Transit System (OATS). OATS, started in 1981, provides fixed-route bus service to the general public. The single 17.5-mile long route extends from the Butte County

Center to Las Plumas High School, passing through Thermalito, Oroville, and South Oroville. OATS uses flag stops in residential areas and signed stops in business districts.

OATS' downtown Transit Center, located at the corner of Montgomery and Myers streets, provides a sheltered waiting area for passengers. It also serves as a transfer point for the Butte County Transit System. The three most frequently used alighting and boarding stops are the Transit Center, Oroville Hospital, and Las Plumas High School.

Other transportation providers in Oroville are the Yellow and Checker Cab companies, which provide 24-hour door-to-door service. Transit services are summarized in Table 5.30-A. Ridership for the Oroville Express and OATS is summarized in Table 5.30-B.

INTER-CITY TRANSIT

Butte County Transit (BCT). BCT connects Oroville to Chico with eight trips per day in either direction and also provides service to Paradise, Gridley, and Biggs.

Western Greyhound Lines. Western Greyhound Lines provides daily connections to Chico, Redding, Marysville, Sacramento, Los Angeles, San Diego, Oregon and Washington.

LOCAL AND REGIONAL PROGRAMS

Butte County Short-Range Transit Plan. Modifications to the OATS route structure and schedule recommended in the November 1991 Plan include elimination of unproductive route segments, additions of trips to the Kelly Ridge service, and extension of service during late afternoons to facilitate limited commute service. Service changes are also recommended for the Oroville Express.

Butte County Congestion Management Program. The 1992 Butte County Congestion Management Program incorporates Transit Service Standards for the Oroville area established in the Butte County Short-Range Transit Plan and suggests a model trip-reduction ordinance that requires large employers to undertake trip-reduction measures. The City of Oroville was one of the initial jurisdictions in the County to adopt a trip-reduction ordinance in December, 1992.

**TABLE 5.30-A
SUMMARY OF TRANSIT SERVICES**

Service	Type	Area Served	Vehicles	Hours	Rides/ Year
Oroville Area Transit Systems (OATS)	Fixed Route 1 Route with service every 2 hours until 12:00 p.m.; every 1 hour until 5:00 p.m.	City and vicinity, including South Oroville and Thermalito	3 buses (2 peak scheduled) 2 accessible by manually placed ramp	7:00 a.m.-5:00 p.m., Monday-Friday	25,248
Oroville Express	Elderly and Disabled dial-a-ride system	City and vicinity, including South Oroville and Thermalito	2 sedans 4 accessible vans	7:00 a.m.-6:00 p.m., Monday-Thursday; 7:00 a.m.-7:00 p.m., Friday and Saturday 7:00 a.m.-2:00 p.m. Sunday	39,900
Butte County Transit	Fixed Route 3 Routes with service every 1-1/2 hours to 2 hours	Chico, Gridley, Oroville, Palermo, and Paradise	7 lift-equipped buses (5 peak scheduled)	6:30 a.m.-6:30 p.m., Monday-Friday; 8:30 a.m.-6:30 p.m., Saturday	94,496

**TABLE 5.30-B
OATS AND OROVILLE EXPRESS RIDERSHIPS, 1986-1991**

	Fiscal Year				
	1986	1987	1988	1989	1990
Average Daily Ridership					
OATS	112	89	89	87	108
Express	108	112	114	108	109

Source: Butte County Short-Range Transit Plan, 1991.

Objectives: Transportation Systems Management

- 5.30a Cooperate with other agencies and jurisdictions to promote local and regional transit serving the area's needs.
- 5.30b Expand transit opportunities for all residents.
- 5.30c Support transit policies for the Oroville area in the Butte County Short-Range Transit Plan and the Congestion Management Program.

Implementing Policies: Transportation Systems Management

- 5.30d Work with Butte County in implementing the Butte County Short-Range Transit Plan for the Oroville area.
- 5.30e Work with Caltrans to promote opportunities for carpooling to Chico and Sacramento.
- 5.30f Encourage and coordinate efforts with the Union Pacific Railroad to develop an express commuter train through Oroville to Sacramento utilizing existing road bed(s) and new railroad facilities and equipment. •

5.40 BICYCLE SYSTEM

The creation of a bicycle system is important to the development of a well-rounded circulation system, and the bicycle system additionally performs a critical role in enhancing Oroville's recreational opportunities. (See Section 7.11 for further discussion of the bicycle system's role in recreation.) The system includes paved off-street bicycle paths or trails (known as Class I bikeways), bicycle lanes designated on public roadways (known as Class II bikeways) and separated by automobile traffic by a lane marking on the street (Caltrans' standards specify roadway paving and striping

requirements), and off-street, unpaved multi-use recreation trails, appropriate for hikers, joggers, and equestrians, as well as bicyclists. Alignments are shown on GP Figure 5.40-A.

Bicycles are clean, quiet, energy efficient, and relatively inexpensive to purchase and maintain, and are often a viable alternative to the automobile. In addition to their appeal to the adult population, many bicycle riders are children and teenagers. The City of Oroville's bicycle system is designed to provide a safe riding environment for residents and visitors of all ages.

The 1983 Oroville General Plan included a Bike Route Study that identified the need for bikeways, methods of route selection, development policies, and standards. This General Plan incorporates many of the previous Plan's policies on the bicycle system, based on the Bike Route Study.

Additional recommendations were formulated by a six-member Bicycle Advisory Board familiar with the Oroville Planning Area, following review of existing City policy and discussions with the California Department of Parks and Recreation staff, and City staff.

Main features of the bicycle objectives and policies that differ from past policies include:

- elimination of bike routes (marked solely by signs, with no pavement striping) in favor of bike paths, bike lanes, and multi-use recreational trails;
- provision of bikeway alignments serving not only outlying areas but also incorporating touring within the Planning Area;
- design of a well-marked bicycle system that connects schools, parks, businesses, and shopping areas with residential areas;
- extension of the Feather River Parkway and identification of River Bend Park as a focal point and staging area; and
- designation of bikeways connecting Oroville and Chico.

Objectives: Bicycle System

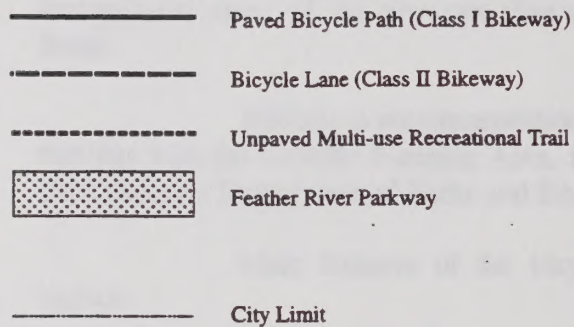
- 5.40a Provide a system of Class I and Class II bicycle paths and lanes and multi-use recreational trails throughout the Planning Area that will increase bicycle access to major facilities, shopping, schools, work centers, and points of interest, and will increase the utility of bicycles not only for recreation, but also as a viable mode of alternative transportation.

To attract users, the bicycle system must be easy to use and safe, and must include adequate sign and pavement marking control, and facilities such as bike racks. An

OROVILLE PLANNING AREA

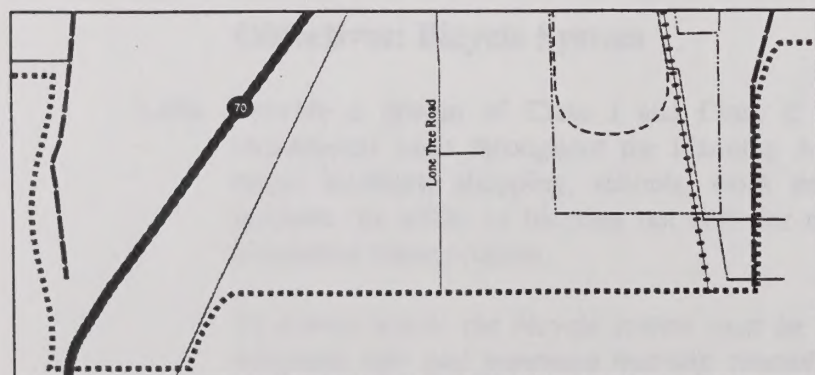
Bikeways and Trails

GP Figure 5.40-A

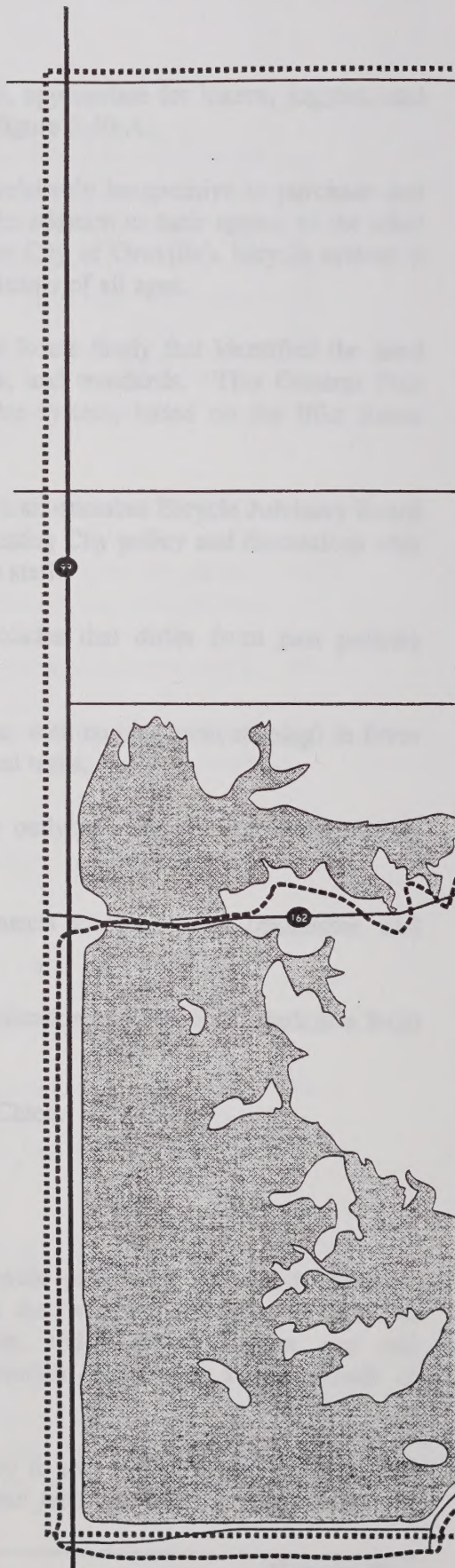


Note: The band of linear park comprised of paths and trails that borders the Feather River on both of its banks is known as the Feather River Parkway. The bikeways and trails system was designed to provide important connections between recreational destinations (as shown on GP Figure 7.10-A), schools (as shown on GP Figure 7.20-A), and other land uses (as shown on the General Plan Diagram).

Source: City of Oroville Bicycle Advisory Board, July 1992.

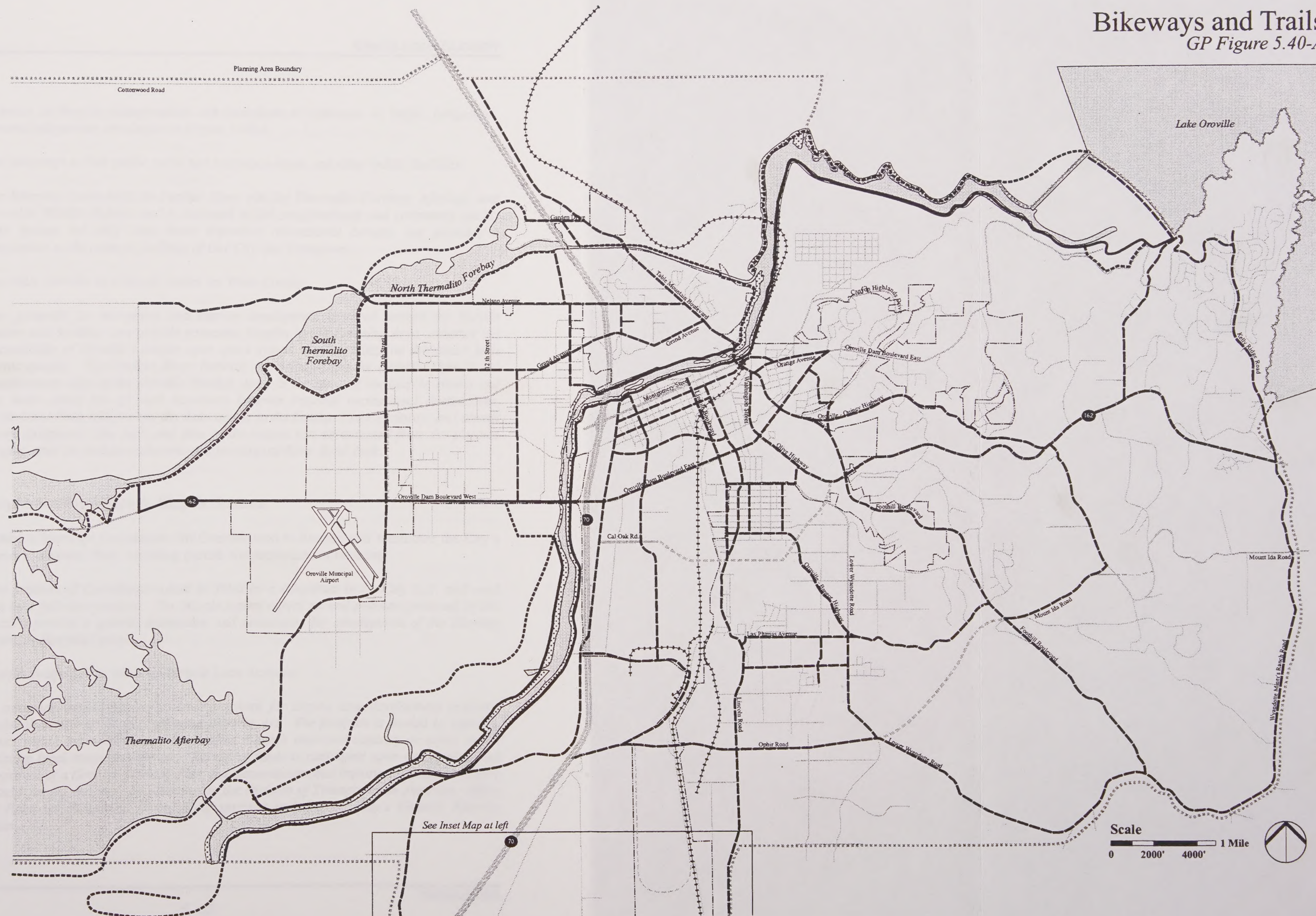


Southern extension of Planning Area



Bikeways and Trails

GP Figure 5.40-A



increase in bicycle transportation can contribute to reduction in traffic congestion. General alignments are shown on Figure 5.40-A.

- 5.40b Use bikeways to link public parks and recreation areas, and other public facilities.

The bikeway system links the Feather River with the Thermalito Forebay, Afterbay, and Oroville Wildlife Refuge, and is designed to link neighborhood and community parks. This system not only links these important recreational centers, but provides a connection to the cultural facilities of Old City and Downtown.

- 5.40c Establish Oroville as a bicycle center for Butte County.

The potential for recreation and tourism development centered around the bicycle system and facilities can provide economic benefits to the Planning Area, enhance the accessibility of Oroville's unique open space system, and capitalize on the area's high scenic quality. The Feather River Parkway, stretching from the Oroville Dam to the southeastern edge of the Oroville Wildlife Area, is the spine of the bicycle system and the main artery for off-road movement between regional recreational destinations. River Bend Park will provide the main access to the Feather River Parkway, and almost every designated bike path and lane in the system can be accessed from the planned staging area (to include restrooms and parking) at River Bend Park.

Implementing Policies: Bicycle System

- 5.40d Select a Bikeways Coordinator (or Coordinators) to develop and administer the City's General Bikeway Plan, including pursuit and acquisition of financing.

The position of Coordinator could be filled by a consultant or by City staff, and need not be a full-time position. The bicycle system objectives and policies contained in this section provide a general orientation and parameters for development of the Bikeway Plan, as described below.

- 5.40e Pursue funding from the State Bicycle Lane Account.

A statewide annual appropriation is provided for bicycle lane development projects, under the authority of the California Bikeway Act. The program is funded by gasoline taxes whose expenditure must be justified through improved capacity or safety on an existing local street or highway. Receipt of funds is contingent upon preparation and approval of a General Bikeway Plan that demonstrates that improved capacity or safety would result, and must be submitted to the Division of Transportation Planning, Office of Regional Planning. Policy 5.40f specifies updating the City's General Bikeway Plan.

5.40f Update the City's General Bikeway Plan in an appropriate format for making application for funding from the Bicycle Lane Account, including:

- accurate location descriptions;
- estimate of project costs including preliminary and construction engineering, right-of-way, and construction costs;
- specifications that reflect conformance with the design standards for bikeways as set forth in the Highway Design Manual Bikeway Planning and Design (7-1000);
- a traffic diagram that shows existing daily commuting bicycle traffic on roadways throughout the Planning Area;
- a traffic diagram that estimates the commuting bicycle traffic expected to use the bikeways and adjacent roadways one year after completion.

See also Policy 5.40e. Although not required for funding, the Plan could also contain a monitoring and reporting component, to assess the success of projects undertaken, to revise and update future plans as necessary, and to maintain an inventory of potential projects that can be quickly implemented when opportunities arise.

5.40g During design, adoption, and implementation of the General Bikeway Plan, cooperate with and seek participation of the Feather River Recreation and Park District, the State of California Department of Parks and Recreation, the Department of Water Resources, and the California Department of Fish and Game.

Planned facilities are within the jurisdiction of these agencies, whose assistance in obtaining financing may be essential.

5.40h Select bikeway alignments based on the following criteria:

- whether the route minimizes potential for conflict with motor vehicle movement and parking;
- whether the route improves access to major facilities and destinations;
- whether the route links public parks and recreation areas and other public facilities;
- whether routes intersect with existing transit lines in support of multi-modal transportation; and
- whether areas are available for convenient and secure parking.

5.40i Reduce conflicts between bicycles and other vehicles by:

- designating on-street bike lanes;
- developing off-street bike paths;
- signing and marking the routes thoroughly;
- monitoring the success of the routes and devising a system to improve their utility, if necessary; and
- adhering to proper design and construction criteria and standards.

5.40j Initiate a bicycle use public awareness program.

This program could include illustrating the alignments throughout the Planning Area, and connections to other communities.

5.40k Coordinate the construction or improvement of the bicycle system with development projects adjacent to the routes, park and recreational facilities, schools, and residential subdivisions, and require developments located on designated bikeways to provide for bicycle use within and adjacent to project boundaries.

5.40l Provide convenient, safe, well-lighted bicycle parking racks or other parking facilities in public places and at bus and auto carpool transfer points, and encourage residential, commercial, and industrial developers to do the same.

5.40m Coordinate with Butte County and the City of Chico in designating access routes for Class I and Class II bikeways to connect Oroville and Chico.

5.50 OROVILLE MUNICIPAL AIRPORT

The Oroville Municipal Airport serves over 60,000 operations per year — including 93 percent by single-engine general aviation aircraft and two percent by business jets. While the Airport is within Oroville's corporate limits, State law charges the Butte County Airport Land Use Commission with preparing and administering an Airport Land Use Plan.

The 1990 Airport Master Plan. The *Airport Master Plan*¹ projects an 18 percent increase in operations by 2010, with jets comprising only two percent of the total, the Plan also recommends planning for a reserve capacity of at least 100 percent. The latter figure would parallel projected Planning Area population growth envisioned by the General Plan.

The 1985 Butte County ALUC Plan. Development in the vicinity of the Airport is regulated by the 1985 *Butte County Airport Land Use Commission (ALUC) Plan*², which is currently being revised. The Plan demarcates and regulates development in three zones — Clear, Approach and Overflight. Additional restrictions are placed on development in the 55 L_{dn} zone.

ALUC policies state that single-family residential development is a compatible land use within the Approach Zone if the population density is not more than one single family dwelling unit per five acres within one mile from the runway. Within the portion of the Approach Zone that is more than one mile from the runway, proposals resulting in four units per acre or more are subject to ALUC review. Generally, multifamily residences, motels, schools and other institutional uses are not permitted in the Approach Zone, while business services and miscellaneous manufacturing are. Nonresidential uses in the Approach Zone and all uses in the Overflight Zone are subject to ALUC review if they result in "large concentrations" of people under downwind and base legs or departure paths of flights. The threshold for review is a concentration of 25 people per acre for non-residential uses and four units per acre for residential uses.

Within the 55 L_{dn} contour, institutional land uses such as schools and hospitals are not permitted. Multifamily residences may be permitted with acoustical analysis and insulation.

At issue are criteria to regulate development that would protect the viability and safety of current operations, allay the concerns of residents, and ensure the Airport's potential role in the area's economy. The CNEL or the L_{dn} methodology average the community noise levels over extended periods of time and may not, by themselves, be adequate measures of the "intrusiveness" of single-event noise in Oroville, where the frequency of flights and ambient noise levels are low.

Objectives: Oroville Municipal Airport

- 5.50a Continue to plan and develop the Airport to maximize its contributions to business efficiency and recreational opportunity in the Planning Area.
- 5.50b Protect the Airport's ability to provide service within the community by insuring compatible development within the airport impact area.

With plenty of room to grow elsewhere, Oroville has the opportunity to avoid repetition of the mistakes that have devalued public investment in both large and small airports elsewhere.

Implementing Policies: Oroville Municipal Airport

- 5.50c Protect the Overflight Zone by limiting residential densities to a maximum of six units per gross acre, with proposals consisting of four units per gross acre or more subject to

ALUC review. Schools and other uses resulting in "large concentrations" of people should be prohibited.

Although most of the Overflight Zone is outside the 55 CNEL contour, it is an area in which low altitude flights cause noise complaints. Safety is another reason for limiting residential density and concentrations of people. Low intensity development increases opportunities for emergency landings that do not hit buildings. Accidents within one mile of an airport account for 22 percent of all serious or fatal general aviation accidents (1974-79 data, National Transportation Safety Board). Using projected airport operations, the probable incidence of near-airport accidents would be one in 10 years (McElroy Report to California Assembly, 1973). The Office of Airports Manual³ recommends a "safety zone" for location of school facilities, with a width of 1,500 feet on the non-traffic pattern side and 4,000 feet on the traffic pattern side, and extending a mile beyond the length of the runway, for jets/large cargo planes.

The present ALUC definition of "large concentration" of 25 persons/acre, at about 250 square feet per office-job, results in only about 6,250 square feet of available space per acre (0.14 F.A.R.). This may be too low of an intensity to support the kind of uses that the area hopes to attract. Several ALUC plans in other localities permit up to 20-25 percent lot-coverage. Facilities such as a 2,000-square foot convenience store on a 10,000-square-foot lot, which may have up to 10 people at a given time, should also be permitted. An option that could be explored with the ALUC is the potential for adopting building intensity standards (for example, a FAR of 0.2), which, compared to the "people intensity" standards, would be easier to evaluate and administer.

5.50d Continue current development restrictions within the 55 CNEL contour.

5.50e Work with the Butte County ALUC to establish an Extended Runway Centerline (ERC) area.

The Airport Land Use Planning Handbook⁴ suggests that the ERC area be 1,000 feet wide and extend 10,000 feet from the landing threshold of a runway.

5.50f Within the Overflight and the ERC zones, acquire and/or require dedication of an avigation easement as a condition of subdivision approval.

An avigation easement is a right to "fly over" granted to an airport owner. It alerts buyers to their proximity to the airport and limits their ability to complain about overflights.

5.50g Actively pursue funding to complete the physical facilities that are a part of the Airport Master Plan of Development.

5.50h Actively pursue the construction of the Master Plan improvements.

ENDNOTES

1. *Master Plan for Oroville Municipal Airport*, City of Oroville, July 1990.
2. *Oroville Airport Land Use Plan*, Butte County Airport Land Use Commission, 1985.
3. *Office of Airport Manuals* published by the Department of Transportation, as cited in *School Site Selection and Approval Guide*, California State Department of Education, 1989.
4. *Airport Land Use Planning Handbook - A Reference and Guide for the Local Agencies*, California Department of Transportation, Division of Aeronautics, July 1983.

6.0 OPEN SPACE, NATURAL RESOURCES AND CONSERVATION ELEMENT

6 OPEN SPACE, NATURAL RESOURCES AND CONSERVATION ELEMENT

This Element establishes objectives and implementing policies that relate to the preservation and enhancement of open space and the conservation of natural resources. As an expression of policy and community awareness, this Element considers the following:

OPEN SPACE FOR THE PRESERVATION OF NATURAL RESOURCES

- Biotic Resources
- Water Quality
- Energy Resources and Conservation
- Waste Management and Recycling
- Archaeological, Historic and Paleontological Resources
- Air Quality

OPEN SPACE FOR THE MANAGED PRODUCTION OF RESOURCES

- Agriculture
- Mineral Resources

Based upon community input and direction, several types of open space and areas identified for natural resources conservation are shown on the General Plan Diagram, including Parks, Environmental Conservation/Safety, lands of the State Water Project, and Resource Management lands. These land use classifications are described more fully in Section 3.10 of the Land Use Element.

Corresponding with the General Plan Diagram, several figures depict open space or conservation areas throughout the Planning Area and function as an inventory of existing and proposed open space land. These include GP Figure 7.10-A, Parks and Open Space; GP Figure 6.11-B, Wetlands; GP Figure 6.11-A, Biotic Resources; EIR Figure 3.11-A, Farmlands; GP Figure 8.10-A, Geologic Hazards; and GP Figure 8-A, Environmental Hazards.

CONSISTENCY WITH STATE PLANNING LAW

California State law requires that an Open Space Element be prepared as one of the seven mandatory elements of a General Plan (Government Code 65302(e)). Government Code section 65560 et. seq. outlines the statutory requirements that govern open space elements. More specifically, the section describes the legislative intent for establishing an Open Space Element is as follows:

"It is the intent of the Legislature in enacting this article to assure that cities and counties recognize that open-space land is a limited valuable resource which must be conserved wherever possible; and to assure that every city and county

will prepare and carry out open space plans which, along with State and regional open space plans, will accomplish the objectives of a comprehensive open space program."

Correspondingly, Government Code section 65302(d) requires that all General Plans include a "...Conservation Element for the conservation, development and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals and other natural resources." The Government Codes expresses the importance of water conservation and coordination with local water agencies, and also stipulates the requirements for General Plans to identify opportunities to manage mineral resources.

This Element has been prepared in conformance with the requirements and intent of the Government Code.

INTEGRATION OF THE OPEN SPACE ELEMENT AND CONSERVATION ELEMENT

In function and content, the State-required Open Space Element and Conservation Element often overlap. The Conservation Element is oriented toward the management of natural resources to prevent waste, destruction or neglect. The Open Space Element, in contrast, emphasizes open space as a land use and requires that preservation and management of natural resources be considered in land use planning and decision-making.

This combined Open Space, Natural Resources, and Conservation Element describes natural resource conservation practices within the State-designated types of open space described below, meeting the requirements of both mandatory elements.

STATE CLASSIFICATION OF OPEN SPACE

State law requires that four types of open space be analyzed in the Open Space Element: open space for the preservation of natural resources; open space for the managed production of natural resources; open space for outdoor recreation; and open space for public health and safety. It is the intent of State law that cities preparing general plans recognize open space as a limited and valuable resource to be conserved whenever possible. Any action by the City to acquire, dispose of, or regulate the use of open space lands in any of these categories must be consistent with this Element.

The section on open space for natural resources contains policies for the preservation of biotic resources, water quality, energy resources and conservation, waste management and recycling, archaeologic, historic, and paleontologic resources, and air quality. Policies for agricultural lands and lands containing mineral resources are in Section 6.20, Open Space for the Managed Production of Resources.

CROSS-REFERENCE TO OTHER ELEMENTS

Open space for outdoor recreation is fully discussed in the Public Facilities and Services Element, as is water supply and conservation. Issues concerning open space for public health and safety are fully described in the Safety Element. Preservation of historic resources is also considered in the City Design Element.

6.10 OPEN SPACE FOR THE PRESERVATION OF NATURAL RESOURCES

The natural resources for which policies of preservation have been designed include biotic resources (including vegetation, wildlife, and habitats), water quality, and energy resources. Preservation of each of these resources should contribute to the preservation of open space within the Planning Area, and open space preservation will, in turn, protect these resources. Waste management and recycling are also addressed in this section, since informed consumption can preserve natural resources by preventing over protection of goods and reduction in the production of non-recyclable materials, promote the reuse of recyclable materials diminishing the need for the use of virgin materials, and aid in preserving as open space those lands that might otherwise be needed as landfill.

Although archaeologic, historic, and paleontologic resources are not classified as natural resources, they are protected under the California Environmental Quality Act as cultural resources. Many archaeologic and paleontologic finds will occur in remaining, unexcavated open space areas within and adjacent to the Planning Area, and this fact, together with the need for strategies for the conservation of these resources, places the discussion of these cultural resources here in the combined Open Space, Natural Resources, and Conservation Element. Conservation and enhancement of air quality is also addressed in this section. Water supply and conservation are addressed in the Public Facilities and Services Element.

6.11 BIOTIC RESOURCES

The Planning Area encompasses habitat types ranging from the grasslands that cover the non-agricultural portions of the Valley floor and include vernal pools, wetlands and ephemeral drainages, through foothill oak woodlands interspersed with riparian woodlands and freshwater marsh wetlands, to chaparral at higher and steeper elevations. Aquatic environments found in the open water of lakes, reservoirs, streams, creeks, and rivers provide a habitat distinct from bordering riparian habitats. Unsurveyed Central Valley portions of the Planning Area may also include habitat types such as valley oak woodlands, which historically dotted the plains. Croplands and orchards serve some habitat functions, as do landscaped areas, or "urban habitat." The dredge tailings that are dispersed throughout Oroville also have some habitat value.

These habitat types span jurisdictional boundaries, with a multitude of agencies involved in their administration. Status of the areas ranges from maintenance as parks, public open spaces, or preserves to those which are privately owned. Some of the habitats cover a small range, whereas others are visible at a regional scale. The size of the habitat does not correlate with its importance; the smaller habitats are often remnants of a much larger past range, and may have the survivor's distinction of being unique.

Although discussed here as distinct entities, these habitats are not functionally discrete. Instead, vegetation associated with one habitat may occur in another, and there are frequently large areas of transition, or ecotones. Animals range between different habitat types, and their movement patterns may vary daily, or seasonally. The interaction of the varied plants and animals as an ecosystem, as well as the importance of ecotones and natural cycles, must be considered when assessing the value of a particular area for preservation or for development.

Plants and animals now living in California may be natives, but the State also contains a number of widely-distributed introduced species. Introduced species which have been present for many years and are adapted to California ecosystems are said to be naturalized. Botanical debates question the propriety and value of preserving naturalized species or habitats (which are present at the expense of native habitat), yet some of these naturalized species are now an integral part of an ecosystem. When considering habitat value within the Planning Area, both native and naturalized species will be considered as biological resources. Biotic resources are shown on GP Figure 6.11-A, and wetlands are shown on GP Figure 6.11-B.

PRESERVES, UNDEVELOPED AREAS, AND WILDERNESS

The Oroville Wildlife Area, owned and operated by the State, is the sole site within the Planning Area that is currently preserved for wildlife and habitat. The character of this area, historically a deposition site for water-carried materials where the Feather River left the confines of its canyon and then the site of massive gold-mining related dredging, differs from the surrounding area. However, the same mobile species and some of the individual plant species and vegetative communities do occur in surrounding areas, or in other portions of the Planning Area.

In 1993 the State Wildlife Conservation Board, which acts as the real estate arm of the Department of Fish and Game, purchased 3,270 acres on North Table Mountain to be managed and maintained as the North Table Mountain Wildlife Area. The wildflower displays on the surface of Table Mountain are known regionally for their beauty, and a number of unique habitats, including vernal pool habitats, are present. Although not within the Planning Area, the North Table Mountain Wildlife Area will contribute to the preservation of habitat diversity in the region. There are differences between North and South Table mountains, but the two share some habitat types, and South Table Mountain, much of which is within the Planning Area, should be considered a potential habitat resource.

Undeveloped areas within the Planning Area range from sites that have already been graded but not constructed to those that have natural features but have been subject to human influences, to areas that maintain pristine, natural vegetation and wildlife. Most of these areas have not been surveyed for the presence of special status or common species, and their habitat value is unknown.

Grazing lands contain areas of both natural and introduced vegetation, but have been subject to human modification through the introduction of livestock. Habitat values of grazing lands are known to some extent, since the goals of the U.C. Cooperative Extension's Hardwood-Rangeland Management Program include the preservation of Blue Oaks in grazing areas. Blue Oaks, while not on State or Federal rare, threatened, or endangered lists, are part of a greater community of California Oaks which have been lost in increasing numbers in recent years as a result of clear cutting for grazing land conversion, fuel wood cutting, and grading for urban development. Blue Oak Woodland is found along the western foothills of the Sierra Nevada-Cascade Ranges, the Tehachapi Mountains, and in the eastern foothills of the Coast Range, forming a nearly continuous ring around the Central Valley. Many types of wildlife use these trees for food and shelter.

Blue Oaks are present within the Planning Area in significant numbers. It is thought that these trees are presently sustaining their populations, and measures to restrict removal during development could ensure their continued viability. The U.C. Extension's program is likely to contribute to overall Blue Oak preservation for areas remaining in pasture, since the program aims for preservation of 25 to 40 percent canopy cover in grazed areas. Grazing lands thus will retain some habitat value and native vegetation, although not to the extent of vegetation and wildlife protected in preserves, and in wilderness areas.

Wilderness areas such as Plumas National Forest, which is outside of the Planning Area, contain mobile species (particularly birds and deer) which may seasonally enter the bounds of the Oroville Planning Area. A portion of the northeast corner of the Planning Area is considered to be part of the Bald Eagle wintering area (a State and Federally endangered species which has also been seen within the Planning Area around the Feather River Fish Hatchery), and migratory Deer herds' winter range.

SPECIAL HABITAT AND SPECIES OF SPECIAL STATUS

In addition to the general habitat types described above, there are special habitat types and areas located throughout the Planning Area. These include areas containing species of special status, as identified by the Department of Fish and Game's (DFG) California Natural Diversity Data Base (CNDDDB), and County-identified Areas of Special Biological Importance (ASBI).

The EIR that was prepared in conjunction with this General Plan contains detailed information on the special habitat types and areas located throughout the Planning Area. Some of this information is summarized in Table 6.11-A, Table 6.11-B, Table 6.11-C, Table 6.11-D, and Table 6.11-E. Table 6.11-A, which shows rare, threatened, or endangered species within Butte County,

OROVILLE PLANNING AREA

Biotic Resources

GP Figure 6.11-A

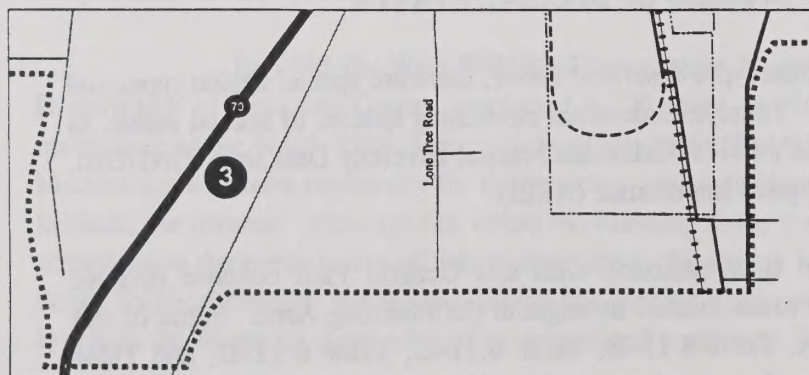
- 1 General Location of Species and Areas of Special Biological Importance
Keyed to Table 6.11-D

Oroville Wildlife Area

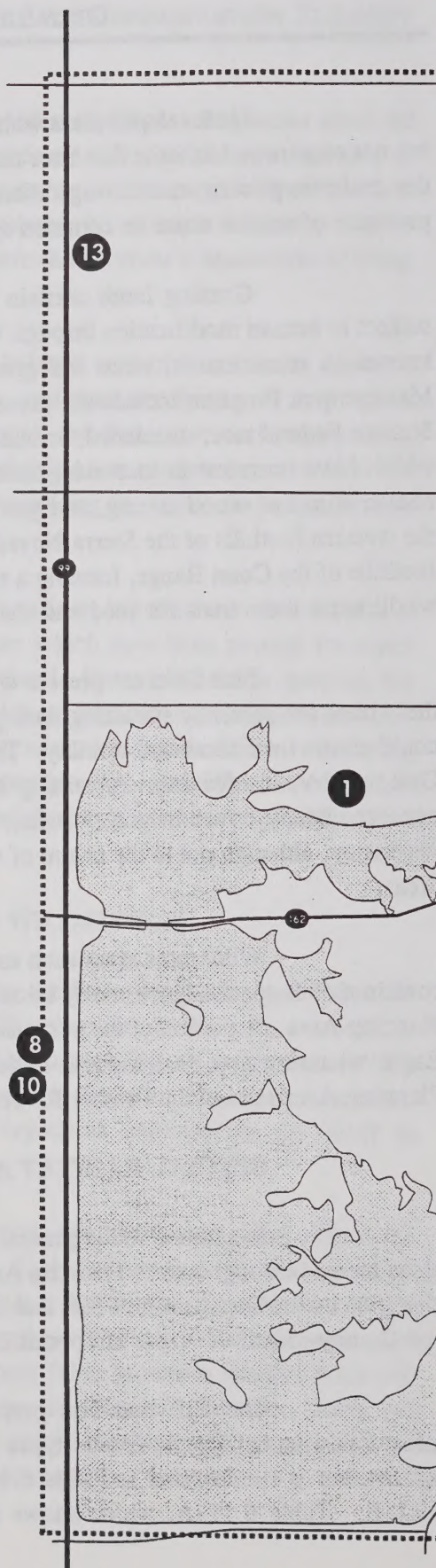
Water

City Limit

Sources: Butte County ASBI maps, as updated by the DFG (1991); DFG CNDDB (1991); Butte County *Draft Energy, Natural Resources and Recreation Element* (1989).



Southern extension of Planning Area



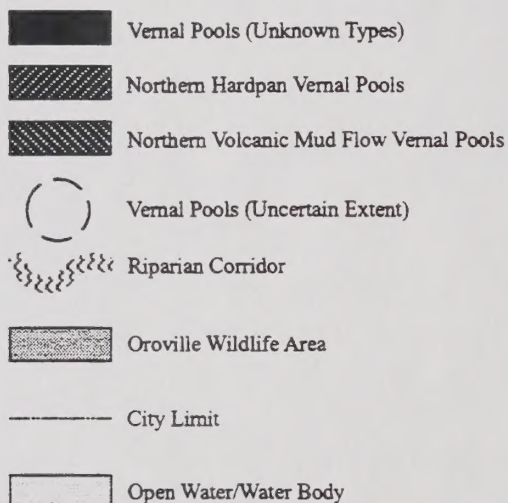
Biotic Resources
GP Figure 6.11-A



OROVILLE PLANNING AREA

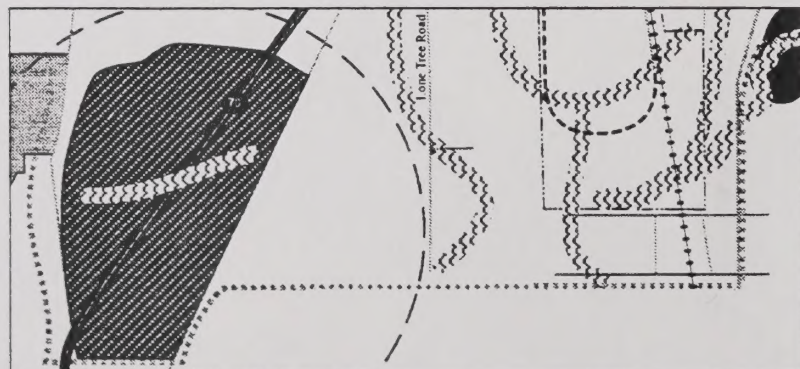
Wetlands

GP Figure 6.11-B

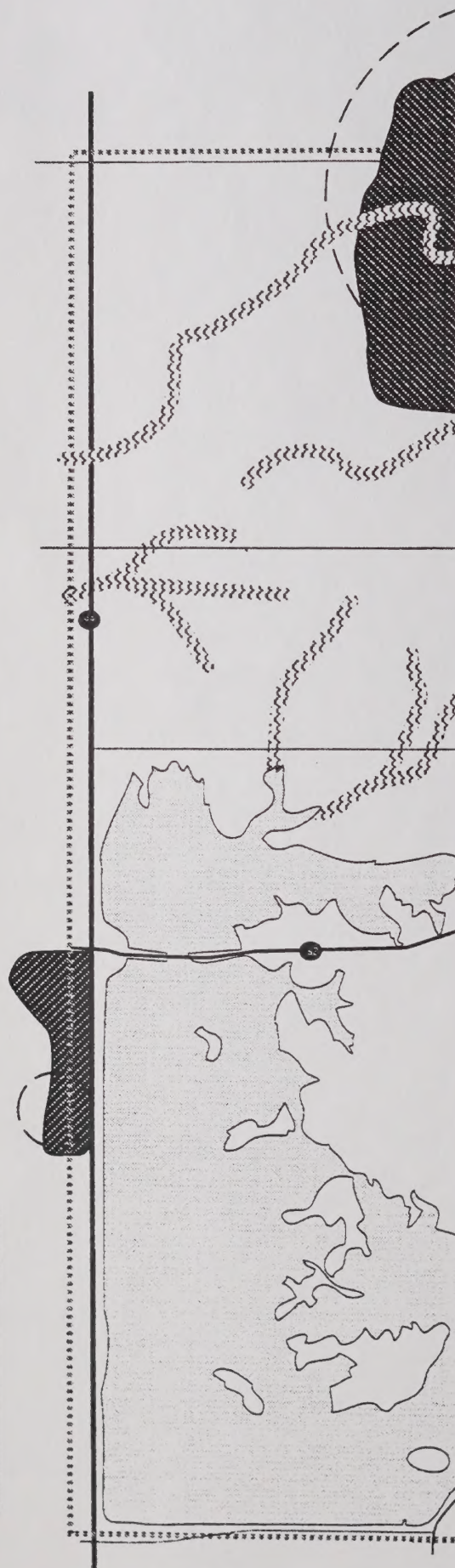


Note: Open water bodies or features of 20 acres or less are not shown here, due to scale. For greater detail, consult the ASBI maps and National Wetlands Inventory maps on file with the City of Oroville. This map is intended to be used generally, not for site-specific review.

Sources: Butte County ASBI maps, as updated by the DFG (1991); DFG CNDDB (1991); U.S. F&WS, *National Wetlands Inventory (1974-1984)*; USGS Quadrangles: Biggs, Oroville, Palermo, Shippee.



Southern extension of Planning Area



Wetlands

GP Figure 6.11-B



contains five species which have been identified by the CNDDDB as present within or adjacent to the Planning Area. Table 6.11-B lists additional species and communities of concern within or adjacent to the Planning Area, as identified by the CNDDDB, DFG, or the U.S. Fish and Wildlife Service. Table 6.11-C lists additional species of special concern, as identified by the DFG.

Table 6.11-D describes the fourteen species or groups whose habitats comprise Butte County's Areas of Special Biological Importance within the Planning Area, as shown on GP Figure 6.11-A. Map identification numbers on the figure have been placed at the center of known locations of a species or a habitat area. The extent of areas are not shown here since, in many cases, they are unknown. Many of the ASBI species are also classified by the Department of Fish and Game (DFG) as Species of Special Concern.

These species are possibly declining or are vulnerable to destruction, and may be considered for official listing or for special management and protection measures. This figure showing locations of ASBI and Species of Special Concern should be used generally, as a guide to areas of concern, and should not be construed as a substitute for site-specific inventory or review. Key Wildlife Areas and Unique Natural Areas as identified by Butte County within or immediately adjacent to the Planning Area are listed in Table 6.11-E.

TABLE 6.11-A
BUTTE COUNTY RARE, THREATENED OR ENDANGERED SPECIES

STATUS KEY:		
SR - State Rare	ST - State Threatened	SE - State Endangered
FT - Federal Threatened	FE - Federal Endangered	
Animals/Plants	Latin Name	Status
Valley Elderberry	<i>Desmocerus californicus</i>	FT
Longhorn Beetle ¹	<i>dimorphus</i>	
Winter-run Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	SE, FT
Giant Garter Snake	<i>Thamnophis couchi gigas</i>	ST
Aleutian Canada Goose	<i>Branta canadensis leucopareia</i>	FE
Bald Eagle ²	<i>Haliaeetus leucocephalus</i>	SE, FE
Swainson's Hawk	<i>Buteo swainsoni</i>	ST
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	SE, FE
California Black Rail	<i>Laterallus jamaicensis</i>	ST
	<i>coturniculus</i>	
Greater Sandhill Crane	<i>Grus canadensis tabida</i>	ST
Western Yellow-billed	<i>Coccyzus americanus</i>	SE
Cuckoo	<i>occidentalis</i>	
Great Gray Owl	<i>Strix nebulosa</i>	SE
Willow Flycatcher	<i>Empidonax traillii</i>	SE
Bank Swallow ²	<i>Riparia riparia</i>	ST
Least Bell's Vireo	<i>Vireo bellii pusillus</i>	SE, FE
Sierra Nevada Red Fox	<i>Vulpes vulpes necator</i>	ST
Wolverine	<i>Gulo gulo</i>	ST
Butte County (Shippee) ²	<i>Limnanthes floccosa sp.</i>	SE ³
Meadowfoam	<i>Californica</i>	
Greene's Orcutt Grass ²	<i>Tuctoria greenei</i>	SR ⁴

¹Identified by the U.S. Fish and Wildlife Service as possibly occurring within the Planning Area.

²Identified by the California Natural Diversity Data Base, Department of Fish and Game (1991) as present within the Planning Area, or vicinity.

³Proposed for Federal listing as Endangered.

⁴This plant is also considered to be a Federal Category 1 species, for which the USF&WS has sufficient biological information to support a proposal to list the species as endangered or threatened.

Source: Department of Fish and Game, 1990 and 1991; a compilation of those species occurring in Butte County which are listed in Sections 670.2 and 670.5, Title 14, California Administrative Code, and in 50 CFR 17.11 of the Federal Register; U.S. Fish and Wildlife Service, 1991.

TABLE 6.11-B
ADDITIONAL¹ SPECIAL STATUS SPECIES OR NATURAL COMMUNITIES
LISTED BY THE CALIFORNIA NATURAL DIVERSITY DATA BASE (CNDDB)
AND U.S. FISH AND WILDLIFE SERVICE (USF&WS)

Animals/Plants/Natural Communities	Latin Name
BIRDS	
Black-Shouldered Kite ²	<i>Elanus caeruleus</i>
Northern Harrier ³	<i>Circus cyaneus</i>
Tricolored Blackbird ⁴	<i>Agelaius tricolor</i>
PLANTS	
Adobe Lily ⁴	<i>Fritillaria pluriflora</i>
California Hibiscus ⁴	<i>Hibiscus californicus</i>
Red Bluff Dwarf Rush ⁵	<i>Juncus leiospermus</i> var <i>leiospermus</i>
Sacramento Valley Milk-vetch ⁶	<i>Astragalus tener</i> var. <i>ferrisae</i>
INVERTEBRATES	
Sacramento Valley Tiger Beetle ⁶	<i>Cicindela hirticollis abrupta</i>
Vernal Pool Fairy Shrimp ⁷	<i>Branchinecta lynchi</i>
California Linderiella ⁷	<i>Linderiella occidentalis</i>
Conservancy Fairy Shrimp ⁷	<i>Branchinecta conservatio</i>
FISH	
Sacramento Splittail ³	<i>Pogonichthys macrolepidotus</i>
AMPHIBIANS	
California Red-legged Frog ⁴	<i>Rana aurora draytoni</i>
REPTILES	
Giant Garter Snake ⁴	<i>Thamnophis gigas</i>

TABLE 6.11-B
ADDITIONAL¹ SPECIAL STATUS SPECIES OR NATURAL COMMUNITIES
LISTED BY THE CALIFORNIA NATURAL DIVERSITY DATA BASE (CNDDB)
AND U.S. FISH AND WILDLIFE SERVICE (USF&WS)

Animals/Plants/Natural Communities	Latin Name
NATURAL COMMUNITIES Northern Hardpan Vernal Pool Northern Basalt Flow Vernal Pool Northern Volcanic Mud Flow Vernal Pool Great Valley Cottonwood Riparian Forest Great Valley Willow Scrub Coastal and Valley Freshwater Marsh⁸ Great Valley Oak Riparian Forest⁸ Great Valley Mixed Riparian Forest⁸	

¹ Additional = Species not on the State or Federal rare, threatened, or endangered lists as identified in Table 6.11-A, but having special status and deserving special consideration, as identified by the scientific community.

² A California Department of Fish and Game "fully protected" species, as described in Section 4700 of Chapter 8, Section 5050 of Chapter 2, Division 6, Chapter 1, Section 5515. This species is known to occur in the vicinity.

³ Although considered demonstrably secure on a worldwide basis, the California population of Northern Harriers is considered by the CNDDB to have a restricted range, and to be rare.

⁴ This is a Federal Category 2 species, which means that existing information indicates that it may warrant listing by the Federal Government as a threatened or endangered species, but substantial biological information to support a proposed rule is lacking. The CNDDB considers the California Hibiscus to be endangered in California, and on a worldwide basis.

⁵ This plant is a Federal Category 3C, which means that it has been withdrawn for candidacy for Federal listing as a threatened or endangered species. The CNDDB considers this plant to be endangered in California, and on a worldwide basis.

⁶ Recommended for Federal Category 2.

⁷ Recommended for Federal Category 1, which means the USF&WS has sufficient biological information to support a proposal to list the species as endangered or threatened.

⁸ Discovered in field surveys performed by the California Department of Fish and Game (1991-1992).

TABLE 6.11-C
ADDITIONAL¹ SPECIES OF SPECIAL CONCERN² IDENTIFIED BY THE DEPARTMENT OF
FISH AND GAME (DFG) WITHIN OR ADJACENT TO THE PLANNING AREA

Birds/Mammals/Reptiles/Amphibians	Latin Name
BIRDS	
American White Pelican	<i>Pelecanus erythrorhynchos</i>
Common Loon	<i>Gavia immer</i>
Cooper's Hawk	<i>Accipiter cooperii</i>
Double-crested Cormorant	<i>Phalacrocorax auritus</i>
Ferruginous Hawk	<i>Buteo regalis</i>
Harlequin Duck	<i>Histrionicus histrionicus</i>
Long-billed Curlew	<i>Numenius americanus</i>
Long-eared Owl	<i>Asio otus</i>
Merlin	<i>Falco columbarius</i>
Prairie Falcon	<i>Falco mexicanus</i>
Purple Martin	<i>Progne subis</i>
Sharp-shinned Hawk	<i>Accipiter Striatus</i>
Yellow Warbler	<i>Dendroica petechia brewsteri</i>
MAMMALS	
American Badger	<i>Taxidea Taxus</i>
Townsend's Big-eared Bat	<i>Plecotus townsendii pallescens</i>
Western Mastiff Bat	<i>Eumops perotis californicus</i>
REPTILES	
Horned Lizard	<i>Phrynosoma coronatum frontale</i>
Western Pond Turtle	<i>Clemmys marmorata pallida</i>
AMPHIBIAN	
Yellow-legged Frog	<i>Rana boylei</i>

¹ Additional = Species not on the State or Federal rare, threatened, or endangered lists as identified in Table 6.11-A, not listed by CNDDDB or USF&WS as identified in Table 6.11-B, and not part of an ASBI as identified in Table 6.11-D.

² Species of Special Concern = Possibly declining or vulnerable to extirpation, and may be considered for official listing or for special management protection measures. This rating may be based on breeding status.

Source: Department of Fish and Game, May 1991.

TABLE 6.11-D
SPECIES AND AREAS OF SPECIAL BIOLOGICAL IMPORTANCE (ASBI) IN THE PLANNING AREA

Map ID #	Common Name	Latin Name	Species or Area Status	Notes
1	Bald Eagle	<i>Haliaeetus leucocephalus</i>	SE, FE, ASBI	Wintering area
2	Barrow's Goldeneye	<i>Bucephala islandica</i>	CSC, ASBI	Wintering area
3	Bogg's Lake Dodder	<i>Cuscuta howelliana</i>	ASBI	Occurs in Northern Hardpan Vernal Pools
4	Burrowing Owl	<i>Athene cunicularia</i>	CSC, ASBI	Occupies grasslands
5	California Gull	<i>Larus californicus</i>	CSC, ASBI	Wintering area
6	Columbian Black-tailed Deer	<i>Odocoileus hemionus columbianus</i>	ASBI	Deer migration area, winter range
7	Golden Eagle	<i>Aquila chrysaetos</i>	CSC, ASBI	May be found around Lake Oroville
8	Greene's Orcutt Grass	<i>Tuctoria greenii</i>	SR, ASBI	Occurs in Northern Hardpan Vernal Pools
9	Heron	<i>various</i>	ASBI	Heronry area
10	Northern Harrier	<i>Circus cyaneus</i>	CSC, ASBI	Nest found in Greene's Orcutt Grass in Northern Hardpan Vernal Pool
11	Osprey	<i>Pandion haliaetus</i>	CSC, ASBI	Fishing area
12	Short-eared Owl	<i>Asio flammeus</i>	CSC, ASBI	Occupies grasslands
13	Waterfowl	<i>various</i>	ASBI	Winter waterfowl area of concentration
14	Yellow-breasted Chat	<i>Icteria virens</i>	CSC, ASBI	Breeds in riparian areas

Notes:

SR= State Rare

ST= State Threatened

SE= State Endangered

FE= Federal Endangered

ASBI= Area of Special Biological Importance

CSC= California Department of Fish and Game Species of Special Concern

This table is keyed to Figure GP Figure 6.11-A, Biotic Resources.

Sources: Butte County; DFG.

FISHERIES

Resident and anadromous fish (those that live in both fresh and salt water during their life) can be found along the Feather River downstream of Oroville Dam. Prominent species include the White Catfish, an important resident sport fish, and anadromous fish such as the American Shad, Striped Bass, and Chinook Salmon. Trout and Carp are also found in waters within the Planning Area. The Feather River Fish Hatchery operated by the DFG is located downstream of Oroville Dam, and produces Chinook Salmon and Steelhead Trout as mitigation for the construction and operation of Oroville Dam, which blocked fish migration. The DFG also maintains a warm water fishery in Lake Oroville.

STREAMBED AND RIPARIAN CORRIDORS/ LAND-BASED ROUTES OF MOVEMENT

Wildlife corridors range from obvious sites along riparian alignments to subtle pathways through the wilderness. Part of preservation of habitat involves understanding the daily and seasonal movements of the creatures which inhabit the area. Waterways with vegetative cover are assumed to be corridors for wildlife, and the DFG notes that all riparian channels, whether seasonal or annual, should be considered as habitat in their own right, in addition to their value for wildlife movement.¹

Riparian corridors within the Planning Area are shown on GP Figure 6.11-B. These corridors include all "blue line" streams shown on USGS maps. The DFG also notes that wildlife movement corridors should be identified as a band of land larger than riparian habitat, and recommends using the suggested widths recommended by the U.S. Forest Service as noted in their plan on Land and Resource Management. Other corridors include deer herd migration corridors, and the smaller pathways the deer traverse over a period of days.

**TABLE 6.11-E
UNIQUE OR SENSITIVE BIOLOGICAL AND NATURAL AREAS IN OR ADJACENT TO
PLANNING AREA, INCLUDING KEY WILDLIFE AREAS AND UNIQUE NATURAL
AREAS**

Biological or Natural Area	Location	Acres ¹	Comments
Vernal Pool Environments (in Valley Grassland Region):			
Richvale Vernal Pools	Highway 99, one mile South of Highway 162, at Richvale exit	20	Rare stream vernal pools in classic concentric ring pattern
Palermo Vernal Pools	Palermo-Honcut Highway environs	N/A	Scattered pool formations over large area

**TABLE 6.11-E
UNIQUE OR SENSITIVE BIOLOGICAL AND NATURAL AREAS IN OR ADJACENT TO
PLANNING AREA, INCLUDING KEY WILDLIFE AREAS AND UNIQUE NATURAL
AREAS**

Biological or Natural Area	Location	Acres¹	Comments
Oroville Grasslands	Grasslands north and south of Oroville	N/A	Scattered, small pool formations over large grassland areas; most have not been discovered or inventoried and have high sensitivity
Botanically Diverse Spring Floral Areas:			
Vernal pool environments	Scattered locations throughout grasslands	very limited	Habitat for rare and endangered plant species
Table Mountain	Volcanic grassland plateau immediately north of Oroville	7500	Exceptionally rich, diverse and spectacular wildflowers
Valley Riparian Environments and Oak Woodland Environments:			
Feather River Riparian Area		N/A	Major riparian river system; provides critical wildlife and aquatic habitat; productive spawning area for salmon and steelhead; all riparian vegetation is extremely important
Oroville environs	West of Oroville		
Oroville Wildlife Area	Southwest of Oroville		
Lower Feather River	Below Oroville Wildlife Area		
Sensitive Areas for Rare and Endangered Plants:			
Richvale Vernal Pools	Highway 99, one mile south of Highway 162		

**TABLE 6.11-E
UNIQUE OR SENSITIVE BIOLOGICAL AND NATURAL AREAS IN OR ADJACENT TO
PLANNING AREA, INCLUDING KEY WILDLIFE AREAS AND UNIQUE NATURAL
AREAS**

Biological or Natural Area	Location	Acres ¹	Comments
Palermo Vernal Pools	Between Palermo and Honcut		
Table Mountain			
Highway 70/149 environs			
Bidwell Bar Bridge environs			

¹Biological or natural areas for which acreages are not shown are of unknown extent.

Source: *Butte County General Plan Draft Energy, Natural Resources and Recreation Element*, December 1989; City of Oroville.

AGRICULTURAL HABITAT

Agricultural areas, although not usually considered habitat, do perform a habitat function, supplying food and cover for many wildlife species. Birds nest and forage in orchard trees, raptors forage in open fields, and mammals graze and rest in orchards and fields.

URBAN HABITAT

"Urban habitat" refers to those areas of the city that provide a land-based living and feeding environment for birds and mammals. This might include Oroville's parks, street trees, parkway landscaping, yard trees, the golf courses, and vacant lots. The leafy green canopy provides food and shelter for many creatures, and contributes toward a verdant community. Lower-growing shrubs and grasses — both those planted intentionally, and accidental introductions — also provide habitat. The presence of the Oroville Wildlife Refuge and wilderness areas to the east increase the possibility that wildlife may at times wander into the community, or may make their homes in the urban forest.

Objectives: Biotic Resources

- 6.11a Through imaginative design, minimize the disruption of wildlife and valued habitat throughout the Planning Area.

Oroville's wildlife species and habitats are valuable biotic resources, among which are several listed species unique to the region. Species of special concern may become listed as Rare, Threatened, or Endangered during buildout of the General Plan. Implementing policies designed to achieve their continued viability are specified below.

- 6.11b Encourage the preservation and protection of all listed State and Federal Rare, Threatened and Endangered Species (as is most practical for the City of Oroville), that are verified on-site or within the project area.
- 6.11c To the extent reasonable, provide protection through imaginative design and/or mitigation for those species identified by the Department of Fish and Game as "species of special concern" that are found to occur within specific development project limits or are affected by specific development proposals.
- 6.11d To the extent reasonable, preserve, protect, and enhance natural communities of special status.

Five natural communities of special status have been identified by the Department of Fish and Game's (DFG) California Natural Diversity Data Base (CNDDB) within the Planning Area (1991). These include Northern Hardpan Vernal Pool, Northern Basalt Flow Vernal Pool, Northern Volcanic Mud Flow Vernal Pool, Great Valley Cottonwood Riparian Forest, and Great Valley Willow Scrub. Field surveys performed by the DFG have identified the following additional communities (1992): Coastal and Valley Freshwater Marsh, Great Valley Oak Riparian Forest, Great Valley Mixed Riparian Forest. Additional vernal pools locations within the Planning Area have been mapped by the Department of Fish and Game on a U.S. Geological Survey base, and GP Figure 6.11-B displays their locations at a smaller, general scale.

The Planning Area's natural communities of special status are remnants of past vegetative complexes which were formerly more widely distributed, and provide habitat to a number of native creatures. Implementation of the Master Biotic Data Base described in Policy 6.11l might identify additional natural communities of special status.

- 6.11e Through creative design recognize and enhance the links between biotic resources throughout the Oroville Planning Area and the desired life styles the Oroville community offers.

Although now divided by roadways, water projects, and expanses of urban development, the remaining open space and undeveloped land within the Planning Area is part of an interlinked regional ecosystem. The genetic flow between these areas persists, although at a reduced level compared to the pre-European settlement era, and impacts on any portion of the system will affect the rest of the system. Environmental review for projects that will replace habitat with other uses should consider the impacts on seemingly remote sites as part of the cumulative impacts of a project, since study may show that remote sites are actually linked. The Master Biotic Data Base may identify the biological links between seemingly discrete portions of the Planning Area.

- 6.11f Search for and acquire State, Federal and foundation funding to preserve, protect, and enhance riparian and wildlife corridors connecting Blue Oak and other oak woodland habitat areas, vernal pools, the Feather River and other significant drainages, the Oroville

OPEN SPACE, NATURAL RESOURCES AND CONSERVATION ELEMENT

Wildlife Area, South Table Mountain, Migratory and Resident Deer movement corridors, Areas of Special Biological Importance, Key Wildlife Areas, Unique Natural Areas mapped by the Department of Fish and Game and Butte County, wilderness areas such as the Plumas Forest to the east, and other open space areas that function as habitat.

Wildlife corridors, which allow for movement between discrete habitat areas, and are critical to the continued health and diversity of wildlife communities. The maintenance and enhancement of these corridors includes implementation of undercrossings as necessary and as specified below in Policy 6.11r. Migratory Deer movement corridors have been mapped as a part of the Butte County General Plan, and are described further in Policy 6.11v.

- 6.11g Search for and acquire State, Federal and foundation funding to preserve, promote, restore, protect and enhance riparian corridors throughout the Planning Area.

Riparian corridors not only serve as wildlife corridors, but also possess intrinsic habitat value and aesthetic appeal. With significant undisturbed resources, Oroville has an opportunity to maintain an exceptional riparian system, and to avoid the losses suffered in communities that have experienced accelerated growth pressures prior to development of environmental consciousness.

Although a move towards urban stream restoration is underway in the State, significant amounts of riparian vegetation have been lost to urbanization in the last century. Programs include liberating underground streams and revegetation plans, often coordinated with the provision of streamside trails. Grants are available through the Department of Water Resources' Urban Stream Restoration Program for projects that restore or enhance the aesthetic, recreational, fish, and wildlife values of waterways.

- 6.11h Support a multi-use concept for riparian corridors that incorporates open space, aesthetic, habitat, and wildlife corridor values, while addressing the social, cultural, flood control and recreation needs of the Greater Oroville Community.

See also Objectives 7.10d and 7.11b.

- 6.11i Where feasible, landscape public open space areas using native vegetation, to provide habitat for local species.

Native vegetation provides habitat for local species and tends to aid in water conservation, since native species are drought tolerant or resistant. Likely public areas include parks and other City-owned or maintained green spaces. Some native trees may also be appropriate for use in parkways and median strips. See also Policy 7.10n.

- 6.11j Encourage the Department of Water Resources to maintain water levels in State Water Project facilities, including Lake Oroville, to optimize protection of fisheries and other biotic resources, preserve open water as open space, and maximize recreational

opportunities per the Department of Water Resources Bulletin 117-6, in addition to ensuring power generation, flood control, and water supply.

- 6.11k Encourage the Department of Fish and Game to manage and maintain the Oroville Wildlife Refuge for multiple uses, while protecting property values on land adjacent to the refuge.

The Wildlife Refuge, historically a site where water-carried materials were deposited by the Feather River as it left the confines of its canyon, and later the site of massive dredging due to gold mining, is in need of restoration work to provide enhanced habitat value. The 1978 Oroville Wildlife Area Management Plan, any subsequent revisions, and the Department of Fish and Game should be consulted for a full understanding of the plans for the Oroville Planning Area's largest expanse of preserved open space.

Implementing Policies: Biotic Resources

- 6.11l Work toward the preparation of a Master Biotic Data Base for the Planning Area. Such a Data Base may include the following:

- An inventory of listed and common species;
- Locations of habitat and natural communities, including mapping of native woodlands throughout the Planning Area; and
- confirmation of alignments and significance of riparian and wildlife corridors;
- species management plans, where relevant.
- Agricultural fields and groves which may be of significant economic or habitat value to the community.

The above referenced Data Base may be prepared at a time certain through a city-wide effort, or through an incremental compilation of project/site specific studies and surveys.

The General Plan specifies a general level of species protection based on available published information, and where habitats or locations have been mapped. The Plan and related EIR provide a point of departure for more detailed, area-specific studies, which could include site inventories and maps, and may require that consulting biologists perform further study to design management plans. Additional levels of detail could be provided specifying the presently unknown locations of protected and common species, confirmation of the locations of wetlands, and documentation of the ecosystem dynamics of the Planning Area.

- 6.11m Strive to minimize loss of wetland value or acreage consistent with the needs of wildlife and humans. Utilize mitigation banking (if available) to offset impacts to wetlands.

Although wetlands are recognized as a valuable natural resource, they can also have undesirable affects such as serving as a breeding ground for mosquitos and other vectors. For this reason, local mosquito and vector control districts should be consulted when wetland retention or creation is proposed as part of a development project.

- 6.11n Require a biological assessment of any proposed project site where species or the habitat of species defined as Rare, Threatened, or Endangered are believed to be present.

Listings of sensitive and special status species change from year to year, but may include birds, animals, and plants such as the Bald Eagle, Bank Swallow, Valley Elderberry Longhorn Beetle, Butte County Meadowfoam, and Greene's Orcutt Grass, among those special status species thought to be present within the Planning Area in 1991.

- 6.11o Require an appropriately sized buffer on each side of a riparian corridor, stream, wetland, pond, or lake, and a site specific analysis (as appropriate).

Since building intensities and densities stipulated in the Plan are based on gross acreage, development potential of individual properties will not be affected. The size and configuration of the buffer zone should be based on the characteristics and importance of the wetlands, riparian corridor, or wildlife corridor, and the proposed project. The purpose of the buffer zone will be to ensure the long-term viability of the habitat area, and continued presence of wildlife.

- 6.11p If sensitive plants are found to be located within a development site the developer shall be informed that he must mitigate project impacts in accordance with State Law.

Examples of mitigation may include:

- Establishing setbacks from the outer edge of the plant population area;
- Prohibiting livestock grazing or drainage into the setback and plant population area;
- Construction of barriers to prevent compaction damage by foot or vehicular traffic.

- 6.11q Work with the Oroville Mosquito Abatement District and the Butte County Mosquito Abatement District to ensure that preservation, pre-planning and design of water features is coordinated with acceptable disease vector control measures.

Wetlands preservation has numerous environmental benefits, but can be potentially detrimental to human health when mosquito abatement is not considered. The buffers specified in Policy 6.11o are intended to protect wildlife and habitat, and also provide some distance between mosquito breeding grounds and human habitation.

- 6.11r Plan for freeway and arterial street undercrossings where necessary to effectively preserve wildlife corridors.

Objective 6.11f and Objective 6.11g specify preservation, protection, and enhancement of riparian and wildlife corridors. To enable wildlife to move freely throughout the Planning Area, undercrossings beneath the freeway or major thoroughfares may be necessary. The Master Biotic Data Base may identify locations where undercrossings are necessary; they should be designed in consultation with biologists who understand the requirements of the species.

- 6.11s Coordinate with the Department of Fish and Game to ensure the ongoing operation of the Feather River Fish Hatchery.

- 6.11t Work with Butte County to coordinate the maintenance of open space, habitat preservation, and mineral extraction at or near South Table Mountain.

To achieve consistency in neighboring land uses, planning efforts between Butte County and the City of Oroville must be coordinated. Policy 6.22e ensures that biotic resources will be respected when mineral resource extraction occurs.

- 6.11u Coordinate mineral resource extraction with habitat preservation and protection of plant and animal species where appropriate.

Policy 6.22e specifies preparation and assured implementation of a rehabilitation plan for mineral resource extraction as a condition of approval of mining. The rehabilitation plan should address protection of biotic resources.

- 6.11v Work with Butte County and the Department of Fish and Game to ensure the continued presence and appropriate numbers of Migratory and Resident Deer in the Planning Area, by preserving habitat and movement corridors.

Under AB 1521 and AB 3735, the DFG must develop and implement deer herd management plans, including plans for Butte County herds. A preliminary Migratory Deer range map is published in the Butte County Draft Energy, Natural Resources, and Recreation Element, and was prepared in conjunction with the Department of Fish and Game (DFG). This map indicates that the Migratory Deer winter range overlaps into the northeastern corner of the Oroville Planning Area. Resident Deer share the winter range of the Migratory Deer, in addition to a year-round presence throughout the Planning Area.

- 6.11w Work with the Department of Fish and Game to ensure the preservation and enhancement of species of resident and anadromous fish along the Feather River, in Lake Oroville, and throughout the Planning Area.

The Feather River Fish Hatchery operated by the Department of Fish and Game (DFG) is located downstream of Oroville Dam, and produces Chinook Salmon and Steelhead Trout

as mitigation for the construction and operation of Oroville Dam, which blocked fish migration. The DFG also maintains a warm water fishery in lake Oroville.

- 6.11x Encourage the coordinated design of large projects to preserve on-site open space, cluster development (where feasible), and conserve significant habitats that have been identified in the project area.

- 6.11y Make information available to interested parties concerning the presence and condition of species of special status.

Individuals may not always understand that their actions can jeopardize the condition of a plant or animal species. A public information campaign could consist of informational handouts made available at City offices, at the Department of Water Resources Kelly Ridge Visitor's Center, or through the Oroville Wildlife Refuge. An interpretive sign program could provide information stations along trails and at vista points.

- 6.11z Coordinate trails with preservation of habitat and protection of species sensitive to human intrusion.

Trails policies are specified in Section 7.11, and Policy 7.11c emphasizes a concern for preservation of natural vegetation and topography. The open space values that are attractive to trails users are often a result of the presence of wildlife and native vegetation, both of which may be sensitive to human disturbance. Planning for both values will ensure compatibility.

- 6.11z.1 Continue to build the "urban forest" by implementing the Master Street Tree Plan (with amendments), revising the City's Official Street Tree List as needed to incorporate additional appropriate cultivars, and implementing the City's Tree Ordinance (No. 1174) and Street Tree Planting Standards.

- 6.11z.2 Develop a plan to enhance individual oaks, oak woodlands and other tree groups throughout the Planning Area. The Plan will provide options for the management of oaks and other tree resources.

The Master Biotic Data Base will identify the locations of oak woodland throughout the Planning Area, which is the first step in the protection of this natural community. The California Oak Foundation maintains a library of Oak Tree Ordinances in Sacramento, which can offer insight into how various communities have implemented the measures that now protect their oak woodlands.

An arborist may be needed to specify the location of the root zone, although a layperson can estimate the area using the University of California Cooperative Extension at Berkeley, Natural Resources Program's principle that the root zone is an area about one third larger than the drip line area. The drip line is the distance from the trunk to a point on the ground directly below the outermost tip of the branches. The no-disturbance buffer

excludes all grading, digging, trenching, covering the ground with asphalt or concrete, or landscaping with plants that require summer irrigation. Excessive foot traffic should be avoided, and operating heavy equipment and parking vehicles should not occur within the drip line.

See Objective 3.30b in the Land Use Element.

- 6.11z.3 Development proposals on sites that contain significant oak woodlands and related habitat will require the preparation of a site specific tree management and preservation report by a certified arborist or landscape architect. This report shall include recommendations for the retention of healthy mature trees where feasible and promote the concept of oak regeneration corridors within project design.

6.12 WATER QUALITY

OVERVIEW

The State Water Resources Control Board has jurisdiction over nine Regional Water Quality Control Boards, whose charge it is to identify and implement water quality objectives. The Oroville Planning Area falls under the authority of the Central Valley Regional Water Quality Control Board (Region 5), and is located within the Sacramento River Basin (Basin 5A). The Water Quality Control Plan (Basin Plan) which affects this hydrologic sub-basin was most recently revised in March 1990.

Concerns about water quality have evolved in recent years from early efforts to control the most visible problems, such as the discharge of raw sewage to rivers and streams, to today's attention to toxic discharges. Major discharge categories within the Central Valley region include agriculture and silviculture, municipalities and industries, and mineral exploration and extraction.

Balancing water quality considerations is easiest in areas of low human impacts. Where there are humans, there tend to be concentrations of activity, whether the land uses are agricultural, industrial, or urban. All of these land uses have some type of water quality impacts. Water quality problems are typically characterized by erosion and sedimentation considerations, and concerns about contamination of ground or surface water.

Water quality is intimately tied to water supply, since adequate uncontaminated flows significantly mitigate the presence of contaminated flows, through dilution, flushing, and general availability of alternate sources. Water supply is discussed further in Section 7.31. Discharge requirements and pretreatment of industrial wastewater are discussed in Section 7.32.

EROSION AND SEDIMENTATION

Lands that are preserved in agriculture are subject to surface water flows that carry particles away from a site. This erosive action results in downslope or downstream sedimentation, which can impair drinking water, as well as adversely affect fisheries and water-related habitat. In addition, toxic

substances may bind to soil particles, which serve as "taxi" to distribute and circulate contaminants throughout the riparian, estuarine, and marine systems. Given the Planning Area's position, primarily upslope and upstream of the intensive Central Valley agriculture, and the dispersed nature of agricultural operations throughout the Planning Area, it is unlikely that erosion and sedimentation within the Planning Area would be a significant concern. Although, local agricultural operations could affect drainages downstream and outside of the Planning Area.

Erosion and sedimentation can also result from timber harvesting practices, including road construction, logging, and post-logging operations, and from the construction and operation of mines. The Regional Water Quality Control Board (RWQCB) has not identified any particular water quality problems within the Oroville Planning Area related to upstream timber harvesting or mining activities.

Land development and associated construction activities in steeper portions of the Planning Area might be expected to contribute regionally to erosion and sedimentation. The RWQCB encourages the submission of an erosion plan for construction in steeper areas, including areas where greater than 10,000 square feet of surface area and/or more than 100 cubic yards of excavated material will be disturbed; this would probably include construction in all areas of moderate and high slopes.²

Although historically a problem of regional significance, dredging activities are not currently identified as a significant source of erosion and sedimentation within the Planning Area. While flood control maintenance dredging may be necessary on some waterways, it has not been identified by the RWQCB as a problem in Oroville.

CONTAMINATION

Industry-related toxics. As a result of historic use of wood preservative solutions at the Koppers Company Feather River Wood Treatment Plant (now owned by Beazer East, Inc.), contamination of the groundwater has occurred in the vicinity. Hydrogeologic studies done by consultants for Koppers in conjunction with the Environmental Protection Agency (EPA), have detected pentachlorophenol ("penta") and other constituents in water both on- and off-site. Up to 1987, "penta" was the most prevalent of the preservatives used.

Beazer East, Inc. began cleanup activities at the Koppers Superfund site in the fall of 1993 including the classification and washing of contaminated soils at the Koppers plant, and pilot testing of the bioremediation process, using native soil microorganisms, to clean up soils heavily contaminated with "penta".

The construction of an on-site groundwater treatment plant was completed in February, 1994 and began treating contaminated water located on the property. A second, off-site treatment plant began in April, 1993 and continues to treat groundwater in the southern-most area of the contamination. Originally, a temporary measure of discharging the clean water into Wyman Ravine was used until the EPA and the State reached agreement on discharge limits for reinjecting the water back into the aquifer. This agreement has since been reached and Beazer has stopped discharging into Wyman Ravine.

A site at the Louisiana Pacific facility has also been identified by the EPA as a Superfund site, based on the presence of formaldehyde. This substance, part of a glue which was used, was historically discharged into ponds. Because the substance has been found in relatively low concentrations and is known to degrade in the environment over time, it is being monitored for three years prior to initiation of any clean-up efforts.

A site at the former Western Pacific Railroad facility, currently owned and operated by Union Pacific, has also been listed by the EPA as a Superfund site. According to the RWQCB, the site was listed based on the presence of a pond containing waste oil near the western side of the tracks, which has since been cleaned up. The facility is still believed to contain other contaminants in the soil, such as diesel fuel and solvents, and Union Pacific is working with the EPA in a continuing effort to clean all contamination on the site.

Pesticides, fertilizers, herbicides. Although pesticide contamination of groundwater resources often occurs in communities within or bordering the agricultural regions of the Central Valley, this is not an issue identified by the RWQCB in relation to the Oroville Planning Area. Similarly, agricultural drainage containing detrimental heavy concentrations of fertilizers has not been identified as a problem within the Planning Area.

The timber industry uses herbicides as a part of silvicultural operations, to reduce commercial timber competition from weeds, grasses, and other plants, or to prepare a site for planting of commercial species by eliminating existing vegetation. The Sacramento River Preservation Trust is concerned about the contamination of some portions of the Sacramento River, attributable to upstream runoff containing herbicides. Neither the RWQCB nor biologists concerned about the fishery in the Feather River, which passes through Oroville, have reported any similar concerns in the Oroville Planning Area.

Urban runoff. Urban storm water runoff can contain pesticides, herbicides, other synthetic organic compounds, oil, grease, heavy metals, algal nutrients, and bacterial and viral contaminants from wildlife, pets and (in more rural areas) domestic livestock.³ These pollutants can accumulate on dispersed surfaces during dryer months, with the first major storm of the year washing a highly concentrated load to receiving waters. While these contaminants are of continuing concern, the RWQCB has not identified any particular problems associated with runoff in the Oroville Planning Area.

Septic systems. Portions of the Planning Area are unsewered, and residences are on septic systems. According to the County Environmental Health Department, there is no record of any ongoing water quality problems related to contamination by septic systems, although the City is aware of occasional incidents of malfunction.

Objectives: Water Quality

- 6.12a Work with the Regional Water Quality Control Board (RWQCB) to protect, improve and enhance groundwater quality in the region.

- 6.12b Where feasible given flood control requirements, maintain the natural condition of waterways and flood plains to ensure adequate groundwater recharge and water quality.

An increase in impervious surfaces works to diminish percolation of water into the aquifer. The flushing action of adequate flows is necessary to preserve water quality. Preservation of soft or natural-bottom channels aids in percolation and recharge, maintaining water quality. See also Objective 8.20d.

- 6.12c Encourage new commercial and residential developments to connect to the sewerage facilities of the community systems where feasible.

- 6.12d Encourage all new industrial development to connect to the community sewerage system where feasible.

Implementing Policies: Water Quality

- 6.12e Compile existing groundwater management studies and maps and, where necessary, conduct groundwater mapping studies to result in comprehensive coverage of the Planning Area.

One alternative is to compile previous studies that have been prepared for portions of the Planning Area in association with past proposed projects. A second alternative is to work with the Butte Basin Water Users Association which is currently (1994) developing a comprehensive model which will map existing groundwater conditions in the Butte Basin. It is anticipated that the model will have the capability to project the effects of land use changes on local groundwater supplies.

- 6.12f Encourage the utilization of Best Engineering Practices for storm water collection and disposal.

This policy is consistent with Department of Fish and Game recommendations.

- 6.12g Participate in the ongoing regional response to the EPA's stormwater permit regulations.

The Planning Area's status as an urban center encompassing agricultural lands means that sources of potential groundwater contamination range from polluted urban runoff such as oil, grease, and heavy metals to agricultural pollutants such as pesticides, herbicides, fertilizers, and bacterial or viral contaminants from animals. The Planning Area's fisheries may be directly and adversely impacted by polluted runoff that ends up in the Feather River. The RWQCB is developing guidelines that may, when implemented, require the use of best management practices by all jurisdictions in the maintenance of the quality of stormwater runoff.

- 6.12h Require applicants to take and analyze soil samples prior to grading or construction in areas with an historical or suspected presence of toxic materials, such as Superfund sites,

or other sites identified by the City or concerned agencies. If contamination is discovered, prior to development consult with the appropriate agencies and commence the proper clean-up measures.

The Regional Water Quality Control Board, State Department of Health Services, or U.S. Environmental Protection Agency can provide information or referrals on clean-up measures.

- 6.12i Construct treatment plants or systems, or require that those responsible for contamination construct treatment plants or systems to remediate contaminated groundwater to ensure availability of potable groundwater.

Beazer East, Inc., now managing the Koppers Superfund site, has designed extraction and treatment systems to remediate contaminated off-property groundwater. Activated carbon is used to remove chemicals, and the treated water initially is discharged to Wyman Ravine; the final system will use recharge wells to return the treated water to the aquifer. On-property groundwater treatment systems are also under design, as are other types of remediation.

- 6.12j Prohibit residential development in areas of known toxic contamination until such contamination has been remediated or mitigated.

Very low density residential development is proposed south of Ophir Road in an area that has been identified as underlain by a plume of contaminated groundwater.

6.13 ENERGY RESOURCES AND CONSERVATION

REGIONAL SETTING AND SOURCES

Electricity and natural gas are provided to most of Oroville by Pacific Gas and Electric Company (PG&E). Hydroelectricity, the leading source of energy within the County, is produced by 18 facilities, three of which are within the Oroville Planning Area (Edward Hyatt #1 and #6, Kelly Ridge, and Thermalito #1 and #4). Edward Hyatt #1 and #6 located at Lake Oroville, has a production capacity of more megawatts than the other 17 facilities combined.

The prevalence of rivers and creeks flowing from the Sierra Nevada foothills has contributed to the predominantly eastern County location of hydroelectric facilities. The City of Oroville, immediately downstream of Lake Oroville, is ideally situated to receive the benefits of this hydroelectric energy resource.

Oroville also contains biomass conversion cogeneration plants, the Pacific Oroville Power Inc. (POPI) plant, the Koppers biomass plant, and the 7.5 megawatt cogenerator plant at Cal-Oak Road. The POPI plant burns wood waste (from agricultural and timber operations) to generate electricity, which is sold to PG&E. The Koppers facility burns wood waste from on-site lumber operations; the system

produces enough energy to meet all on-site electricity and heat needs, with the surplus sold to PG&E. For part of the year, the Cal-Oak Road facility reclaims wastewater, selling electricity to PG&E, and producing salt as a saleable by-product.

Electricity is delivered by a network of power plants and transmission lines located throughout the area; transmission line corridors are shown on GP Figure 8-A. Substations within the Oroville Planning Area include the Oroville, Wyandotte, Louisiana Pacific, Tres Vias, and Palermo substations. Electrical transmission lines running through the Planning Area include lines carrying over 500 kilovolts.

Natural gas supplies within Oroville come mainly from Canada, and are distributed to the region through the Hershey Station in Colusa County. Natural gas travels in a pipeline along Highway 99, turning east toward Oroville at Highway 162, paralleling the highway until it reaches central Oroville.

BUTTE COUNTY ENERGY DEVELOPMENT CONTEXT

According to the Butte County Draft Energy, Natural Resources, and Recreation Element, few new energy facilities are expected to be constructed within the County. A loss of government-induced economic incentives provides one explanation, as does the realization that hydroelectric power, the primary method of energy production within the County, is almost fully developed.

Cogeneration, including waste to energy development, is a resource that has not been fully developed within the County, and is an area of potential growth. The types of local waste that could be used include rice straw, orchard pruning remains, and sawdust waste. Solar energy is not currently considered economically feasible in the County, and wind, geothermal, and oil and gas production are not expected to occur at any significant levels.

ENERGY CONSERVATION

In addition to those resources reviewed above, energy conservation itself may also be viewed as a potential energy resource, since the prudent use of energy will allow greater utilization of existing resources. Conservation might include such measures as reduced demand and reduction in wasted energy, recycling, and development of new forms of energy production.

Reduced demand and reduction in wasted energy. Reducing demand and reducing wasted energy might include residential, commercial, and industrial educational outreach programs designed to inform the consumer about options for energy conservation, and energy-efficient architectural design. Transportation-related measures which lead to energy conservation might include urban design and land use patterns which reduce trips, minimizing fossil fuel use, and Transportation Systems Management (TSM) and Transportation Demand Management (TDM) measures, as described in Section 5.30.

Recycling. Recycling resources saves energy, since the recycling process tends to use less energy than primary production of resources. This is true of all resource types, from the more commonly

recycled items such as glass, paper, aluminum, and tin to fossil-fuel-based resources such as plastics and automobile-related waste oils. Source reduction eliminates the need for recycling. As noted in Section 6.14, the City has prepared a Source Reduction and Recycling Element and a Household Hazardous Waste Element in response to AB 939. These elements specify programs whose full implementation will allow the City to meet its State-mandated goals of source reduction and recycling.

New forms of energy production. Cogeneration, waste-to-energy conversion, and development of solar or wind energy, some of which are now developed, may all be possible for portions of the Oroville Planning Area. Use of cogeneration and waste-to-energy conversion might be viewed as conservation measures, since they utilize waste products which would otherwise require an input of energy for disposal. Solar or wind energy may be viewed as potentially energy conservative since the resources are "free" and unlimited, compared to nonrenewable resources, which could then be conserved for energy production in the future.

Objectives: Energy Resources and Conservation

- 6.13a Encourage utility agencies to use existing transmission corridors for future power transmission line development.
- 6.13b Where technologically feasible, encourage future construction of power transmission lines underground if conflicts with proposed adjacent land uses would otherwise occur.
- 6.13c Conserve scarce or nonrenewable energy resources and encourage the use of alternative energy sources.

Nonrenewable resources such as fossil fuels are considered scarce in the long term, since they are finite. Many conservation measures rely on voluntary individual behavior for implementation, although some measures have the support of governmental bodies. For example, State law requires the incorporation of energy conservation features in the design of all new site development and construction.

- 6.13d Support implementation of energy-related policies in the most recent version of the *Draft Butte County Energy, Natural Resources, and Recreation Element* (1989).

County policies emphasize active participation in current and future energy provision and conservation.

- 6.13e Consider energy efficiency in architectural design.

Implementing Policy: Energy Resources and Conservation

- 6.13f Coordinate with PG&E to educate the public about the need to conserve scarce energy resources.

Residential, commercial, and industrial educational outreach programs can present consumers with options for energy conservation. Dissemination of information can have a significant impact in reducing consumption, as awareness by individuals and businesses leads to changes in behavior.

- 6.13g Notify local utility service providers of proposed development projects during the environmental review stage in order that they may comment on impacts the proposed projects may have on the available capacity of current utility facilities and the need for expansion of facilities.

6.14 WASTE MANAGEMENT AND RECYCLING

Due to concerns about the shrinking availability of landfill space, the State has passed legislation intended to address the problem at its source. Assembly Bill 939 (Public Resources Code 41000 *et seq.*), the California Integrated Waste Management Act of 1989, requires every City and County in the State to prepare a Source Reduction and Recycling Element (SRRE) that identifies how the jurisdiction will meet the mandatory waste diversion goals set by the State of 25 percent by 1995 and 50 percent by 2000. AB 939 (Government Code 655831.1) also requires every jurisdiction to develop a Household Hazardous Waste Element (HHWE) to plan for the proper management of domestic hazardous waste. The City of Oroville's SRRE and HHWE were completed in June 1992.

Solid waste. Municipal and residential solid wastes generated in the Planning Area are transported by the Oroville Solid Waste Disposal Company (OSWDC) to a transfer station on Fifth Avenue and disposed of in the Neal Road Landfill, about eight miles southeast of Chico, operated by the Neal Road Landfill Company. This 100-acre Class III (non-hazardous wastes) landfill serves much of the County, accepting not only municipal and residential solid wastes, but also septic tank residues, non-toxic olive oil gums, and rinsed pesticide containers.

It is estimated that the landfill has the capacity to continue to receive wastes past 2005, and, after this time, additional capacity will need to be arranged, possibly through increasing the depth of fill on the site, rather than through acquisition of additional land. With implementation of source reduction and recycling programs throughout the County, the life of the landfill could be extended.

According to the City's SRRE (which covers only the incorporated portion of the Planning Area), Oroville currently disposes of approximately 12,967 tons of material per year, including paper, plastic, glass, metal, yard waste, other organics, other wastes, and special wastes. In addition, 2,800 tons of materials are diverted through source reduction, recycling, and composting programs. Based on the existing diversion in the City of Oroville and the total quantity of solid waste generated by residents (about 16,530 tons, which includes 3,560 tons of material that is incinerated annually), the diversion level is approximately 17 percent. The single largest component of the waste stream is paper (3,650 tons), followed by "other organics" (2,310 tons) and yard waste (1,725 tons).

Source reduction and recycling. The City's *Source Reduction and Recycling Element* provides a summary and analysis of existing and needed source reduction, recycling, and composting

programs and facilities, and strategies for handling special wastes. Implementation measures are included, with the Oroville Fire Department primarily responsible. The Fire Department also coordinates certain aspects of the program with Butte County Public Works, the City's Planning Department, and the franchise hauler, Oroville Solid Waste Disposal Company.

Planning goals specified in the *Source Reduction and Recycling Element*, include:

- Extending the useful life of the Neal Road Sanitary Landfill through cost effective waste diversion programs tailored to jurisdictional-specific wastestream characteristics.
- Preserving the environmental quality of the Butte County area by promoting the safe collection, processing, diversion and disposal of solid waste generated within each jurisdiction.
- Promoting effective coordination among the public, private and non-profit sectors to insure effective management and administration of solid waste programs at a local level.
- Encouraging the regional compatibility and integration of solid waste programs and policies among the County and incorporated jurisdictions.

Even prior to completion of the *Source Reduction and Recycling Element*, the City was working closely with the OSWDC to expand their existing source reduction and recycling programs. In addition to their role as municipal waste hauler, the OSWDC operates five recycling centers, and specializes in household-type materials, including plastic, aluminum, tin, glass, and paper. The OSWDC also recently completed (1994) construction of a material recovery facility which will engage in intensified sorting, readying recyclables for hauling to market. Other recycling companies within the Planning Area emphasize the recycling of scrap metal and assorted materials.

Hazardous waste. The Butte County Revised Draft Hazardous Waste Management Plan, 1988, estimates that in 1986 approximately 6,400 tons of hazardous waste were generated in Butte County. Hazardous waste generated and transported within the Oroville area has been estimated at about 665 tons in 1986, as shown on Table 6.14-A. Discussion of totals generated within the County does not include wastes generated and managed on site, such as the 22,350 tons of waste treated on site by Koppers Company in 1986.

There are currently two hazardous waste storage and transfer facilities in Butte County. The first is the Oroville Solid Waste Disposal Company's Household Hazardous Waste facility located in Oroville on South Fifth Avenue. The other is located at the Ord Ranch Transfer Station outside of Gridley.

Both facilities are operated under the authority granted by the California Environmental Protection Agency, Department of Toxic Substance Control. The Oroville facility is currently open two days per month and accepts household hazardous wastes as well as "conditionally exempt small generator hazardous waste". Examples of common household hazardous wastes include motor oil, weed killers, household cleaners, wood preservatives, paints, paint thinner, auto and furniture polishes, chemical drain cleaners, pesticides, fertilizers and pool supplies. "Conditionally exempt small generator hazardous waste"

OPEN SPACE, NATURAL RESOURCES AND CONSERVATION ELEMENT

consists of wastes from small commercial businesses which generate less than 27 gallons (220 pounds) of hazardous waste, and less than 0.27 (12 ounces) of extremely hazardous waste per month. The Gridley facility is currently open one day per month and accepts household hazardous waste.

Wastes brought to both facilities are dealt with according to a hierarchy of handling methods. The most preferable handling operation is reuse, followed by recycling, fuel blending, incineration and land filling as a last alternative.

A-C Industrial Cleaning Company has also recently been awarded a contract to construct and operate a household hazardous waste facility to serve the City of Chico. The household hazardous waste facility will be located behind A-C Industrial's current building at the Chico airport. The company is planning to have the facility constructed and operational in 1994.

The goals of the City's *Household Hazardous Waste Element* are to:

- Focus on managing HHW by reducing quantities generated at their source or by safely collecting, recycling, composting, or using environmentally safe methods of transformation and land disposal for those wastes that cannot be reduced at the source, recycled or otherwise processed; and
- Increase public awareness of and maximize public motivation to participate in the HHW program.

Implementation of the *Household Hazardous Waste Element* is anticipated to accomplish the following short-term (1991-1995) and medium-term objectives (1996-2000) and continue:

- To reduce the amount of HHW generated within Oroville by advocating the use of products not harmful to the environment in the short-term planning period.
- To reduce the amount of HHW disposed in the County landfill in the short-term planning period.
- To plan for and complete future expansion of the Oroville Household Hazardous Waste Recycling and Transfer Facility.
- To provide reusable HHW materials dropped-off at the Oroville Household Hazardous Waste Recycling and Transfer Facility to the general public.
- To investigate markets for potential recycling of HHW collected at the Oroville Household Hazardous Waste Recycling and Transfer Facility in the short-term planning period and to recycle and reuse 50 percent of all household hazardous wastes generated within the City by 1995.
- To continue to cooperate with Butte County to develop regional approaches to the management and disposal of HHW that will result in a lower management cost to the City

and County and allow residents in the surrounding County unincorporated area to use the Oroville Household Hazardous Waste Recycling and Transfer Facility.

- To continue to promote markets for recycled HHW through City procurement of items such as re-refined motor oil, recycled paint and batteries.
- To continue and expand public education and school curriculum programs addressing HHW management, usage, alternatives and the Oroville Household Hazardous Waste Recycling and Transfer Facility.

Hazardous materials that have accidentally entered the environment are described in detail in Section 6.12, since contamination on the surface ultimately may leach downward to affect water quality. In addition to contaminated sites being subject to monitoring by the Regional Water Quality Control Board, three Federal Superfund sites within the Planning Area, as shown on GP Figure 8-A, are under investigation by the Environmental Protection Agency. Other contaminated sites include the locations where tanks containing hazardous materials have leaked, and their mitigation is under the supervision of the Oroville Fire Department.

**TABLE 6.14-A
HAZARDOUS WASTE GENERATION AND TRANSPORT
IN THE OROVILLE AREA
1986**

Facility Name	Type of Waste	Tons in 1986
City Block Repair	Unspecified solvent mixture	0.22
Koppers ¹	Not specified	47.00
Louisiana Pacific ¹	Unorganic solid waste Unspecified solvent mixture; waste oil and mixed oil	9.80
Omark-RCBS, Inc.	Empty containers; unspecified solid waste; halogenated solvents; empty containers	43.56
PG&E Oroville Service Center	Halogenated solvents; empty containers	2.28
5th Avenue Body Shop	Unspecified solvent mixture	0.22
Oroville Total ²		103.08
Butte County Total ³		664.50

¹Federal Superfund site due to surface and groundwater contamination.

²These figures and this total include hazardous wastes which are produced and transported in the Oroville area, and may not reflect wastes produced and treated or stored onsite, or wastes produced elsewhere and deposited in the Oroville area.

³This total includes only those hazardous wastes produced and transported within the County, and does not include the more than 4,000 tons of hazardous waste (mostly waste oil) produced elsewhere and transported through the County.

Source: 1986 Butte County Hazardous Waste Management Plan.

Objective: Waste Management and Recycling

- 6.14a Reduce the generation of solid waste, including hazardous waste, and recycle those materials that are used, to slow the filling of local and regional landfills, in accordance with the California Integrated Waste Management Act of 1989 (AB 939).

AB 939 requires every City and County in the State to prepare a Source Reduction and Recycling Element (cited in Policy 6.14b below) that identifies how each jurisdiction will meet the mandatory waste diversion goals set by the State, of 25 percent by 1995 and 50 percent by 2000.

Implementing Policy: Waste Management and Recycling

- 6.14b Implement measures specified in the Source Reduction and Recycling Element and the Household Hazardous Waste Element.

Prepared in response to AB 939, these elements were completed in June 1992. It is anticipated that adoption and implementation will allow the City to meet its State-mandated goals of source reduction and recycling. See also Policy 8.40b.

6.15 ARCHAEOLOGIC, HISTORIC, AND PALEONTOLOGIC RESOURCES

CULTURAL RESOURCES

People have lived in what is today California for at least 10,000 years, and perhaps much longer. The physical remnants of earlier cultures comprise the State's historic and prehistoric resources. The scale of remaining prehistoric resources tends to be smaller than that of historic resources, since early peoples engaged in less dramatic landscape transformation. Oroville is replete with both types of remnants of the past.

California Archaeological Inventory. Archaeological information is catalogued throughout the State at regional information centers. The Northeast Information Center branch of the California Archaeological Inventory (CAI), located in the Department of Anthropology at California State University, Chico, performed a records search for the Oroville Planning Area, examining the official maps

and records for archaeological sites and surveys within Butte County. The CAI search also reviewed the National Register of Historic Places, the California Inventory of Historic Resources, California Points of Historical Interest, California Historical Landmarks, and Historic Spots in California.

Based on their search and an understanding of the local topography, the CAI has noted that the sensitivity for cultural resources within the Planning Area is extremely high. General results of the search are described in the text below. CAI restricts access to precise site locations, to protect sensitive artifacts from vandalism; thus, the resources are not mapped here.

Office of Historic Preservation. The Office of Historic Preservation in Sacramento notes that the City has never undergone a comprehensive, formal inventory of historic resources. This means that some properties of historic value may be present in the Planning Area, but not yet recognized.

PREHISTORIC PERIOD

The Maidu and Yana. The Maidu peoples who lived in the Oroville area belonged to a language family common to Central Valley peoples in the late eighteenth century, known as the Penutian language family. The Concow (also known as "Konkow"), the northwestern branch of the Maidu nation, inhabited portions of the Central Valley and western slopes of the Sierra Nevada to the north and northeast of the Sutter Buttes, approximately coterminous with today's Butte County. The name "Concow" is said to be derived from a Maidu word roughly translated to mean "plain or earth place."⁴

North of the Maidu lived the Yana nation, considered part of a different and more widely dispersed language group, the Hokan. The southernmost group of the Yana were the Yahi. Despite or perhaps because the Yahi and Maidu lived adjacent to one another and shared similar dwindling territory and resources, by the end of the nineteenth century some researchers had noted a hostility which prevailed between them. Reduced to only a few individuals by 1870, the Yahi were seen few times over the next 40 years, while urbanization proceeded throughout California. In 1911, the lone survivor of the Yahi, Ishi, traveled far south of his original homeland, and came into "civilization" at Oroville. It is primarily from his accounts that the lifeways and destruction of the Yahi are known.

Some researchers have categorized Native American peoples into culture areas, based on identification of a way of life which is distinctively different from that prevailing in other culture areas. The six culture areas of native California include the Northwestern, Northeastern, Central, Great Basin, Southern, and Colorado River culture areas.⁵ Both the Maidu and Yana nations, the larger groups which comprised the Concow and Yahi of the Oroville area, are considered to be part of the Central California native culture area.

While local variations existed in food preferences and consumption, the staple resources available to these peoples included salmon and other fish from the Feather River and its tributaries, acorns from the abundant foothill oaks, deer, elk, antelope, rabbits, and waterfowl. After European settlement within California, a variety of botanical "escapees" from mission fields spread quickly throughout the State, and those producing edible seeds (wild oat and rye grasses) were also used by these tribes.

Remnants of lifestyle. The Concow peoples are thought to have lived primarily in the Concow Valley (north of Oroville) until they were transferred with other Maidu to the Round Valley reservation in Mendocino County.⁶ However, based on the more southerly presence of remnants of occupation locales (villages or campsites), bedrock mortar stations, and a rock shelter, it appears that prehistoric peoples also inhabited the Oroville Planning Area. There are 25 recorded sites of this type within the Planning Area, and 33 additional recorded sites within a one mile radius of the Planning Area. Fishing streams in the foothill areas are especially rich potential sites of prehistoric finds.

Trade routes. The Native American peoples east of the Sierra Nevada belonged to the Great Basin cultures which dominated much of the arid, intermountain west. This group was culturally distinct from the Central Californian cultural group to which the Maidu and Yana belonged. Trans-Sierran trade routes allowed these different peoples to trade in locally scarce commodities such as salt, obsidian, dried fish, or shell beads.⁷ A major interregional trade route followed the Sacramento River from the Delta north to its source. A local trade route branched off from the Sacramento River, following the Feather River through the Oroville area and, it is believed, over the crest of the Sierra Nevada. Oroville's position along the Feather River and in the path of a local trade route helps explain the presence of the varied prehistoric archaeological resources, and suggests that further finds are likely.

HISTORIC PERIOD

Types of historic artifacts and landscapes. Historic events may leave an impact on the landscape which is subtle, or blatant. Early land divisions and the agricultural origins of Butte County are visible in patterns of development and in the continuing agricultural uses of land. Remnants of the Gold Rush period constitute more obvious artifacts and landscapes, and a few of the major resources from this period are described below. Reminders of the importance of timber in the County's past are visible in the presence of roads in wooded areas, cleared expanses, and vegetative changes in logged tracts, some of which would be apparent only to the trained botanist.

Remnants of Gold Rush period. One of the most striking visual elements of the Oroville area is the presence of large mounds of dredge tailings, attesting to the epidemic of gold fever which swept the region. The Oroville gold district runs from west of Oroville, southwest along the Feather River, to a point five miles due east of Biggs, spanning one to two miles in width and nine miles in length.

Placer mining was the dominant form of mining within the Oroville area. (See also Section 6.22, Mineral Resources.) Hydraulic force was used to wash and separate gold ore from gravel, a process that, in the late 1880s, was performed with little or no regard for environmental consequences. Large-scale dredging was performed on the Feather River, and its consequences included massive left-over heaps of spent gravel in the source areas, still visible today, with serious sedimentation and deposition downstream.

While local residents may find these ridges of tailings a commonplace sight or even a nuisance as an impediment to development, they are a regionally distinctive reminder of an important past era and, as such, are a cultural resource.

Placer mining, although dominant, was not the only form of mining in the Oroville area. Lode (or "load") mining also occurred, and remains of hard rock prospectors' mine shafts may be present within the Planning Area.

The influx of population to the area during the late nineteenth century resulted in widespread construction, and historic structures from this period, some of which have been renovated, are recognized historic sites within Oroville.

Recognized historic sites. According to the CAI, the National Register of Historic Places lists seven places (the Fong Lee Company, the Chinese Temple, the State Theater, the Oroville Inn, the Downtown Commercial District, the Main Oroville Post Office, and the Table Mountain Boulevard Bridge over the Feather River). One of the recorded prehistoric sites noted above contains an historic component consisting of historic materials dating from the 1860s. The Old Chinese Cemetery, the Oroville Cemetery, and the Jewish Cemetery are recognized historic points of interest.

The Butte County Draft Energy, Natural Resources, and Recreation Element, identifies the following resources within the Oroville area as historic sites or landmarks: Butte County Pioneer Memorial Museum, the C.F. Lott Home, the Cherokee Museum, the Bidwell Bar site and Tollhouse Museum, the Old Suspension Bridge, the Chinese Temple, the Oroville Dam, the Oregon City Historic Site, and the Mother Orange Tree.

The Mother Orange Tree, a 134-year old tree which has survived floods, frost, fire, and disease, is the ancestor of many of Oroville's orange trees. The tree, of Mediterranean lineage, was brought to Butte County as a seedling in 1856 from Mazatlan, Mexico.

The discovery site of the last Yahi Indian, Ishi, is also located within the Planning Area, at Oak Avenue and the Oroville-Quincy Highway. This site has been designated California Historical Landmark #809.

The City adopted an Historic Area boundary in 1979, for buildings along the south side of Montgomery Street between Oak and Downer streets. When built, remodeled, rehabilitated, or altered, structures in this area must conform to a "Turn of the Century" theme.

PALEONTOLOGIC RESOURCES

No systematic survey of paleontologic resources has been performed for the Oroville Planning Area. Anecdotal evidence suggests that such resources have been observed along the shore of water bodies that are under the jurisdiction of the Department of Water Resources. The presence of fossils in a geologic deposit at one location in the Planning Area increases the likelihood that geologic deposits may, at other locations, contain additional fossil resources.

Objective: Archaeologic, Historic, and Paleontologic Resources

- 6.15a Protect archaeologic, historic, and paleontologic resources for their aesthetic, scientific, educational, and cultural values.

See also policies relating to historic identity and preservation in the City Design Element and in the Land Use Element.

Implementing Policies: Archaeologic, Historic, and Paleontologic Resources

- 6.15b Consult with the California Archaeological Inventory (CAI) and continue to conduct a records search as part of review of proposed development projects to determine whether the site contains known prehistoric or historic cultural resources and/or to determine the potential for discovery of additional cultural resources.

The CAI, whose regional office is located in the Department of Anthropology at CSU Chico, restricts access to precise site locations to protect sensitive artifacts from vandalism, so no publication map was prepared.

- 6.15c Require that applicants for projects identified by the California Archaeological Inventory as potentially affecting sensitive resource sites hire a consulting archaeologist to develop an archaeologic resource mitigation plan; monitor the project to ensure that mitigation measures are implemented.

- 6.15d Require that areas found during construction to contain significant historic or prehistoric archaeologic artifacts be examined by a qualified consulting archaeologist or historian for appropriate protection and preservation.

The California Environmental Quality Act (CEQA) requires evaluation of any archaeological resource on the site of a development project. Unique resources, as defined by State law, should be protected, either by physical measures or by locating development away from the site. A preferred preservation method involves covering a site with earth fill for potential future, leisurely excavation; immediate excavation by qualified archaeologists may be undertaken if such protection is infeasible. If human remains are recovered, State law requires immediate notification of the County coroner, and cessation of work until the situation is resolved.

- 6.15e For projects involving Federal land, or requiring Federal permission (including review by the U.S. Army Corps of Engineers) or funding, work with applicants to meet appropriate criteria for archaeologic resource review, prior to commencement of work.

Projects involving the Federal government fall under a stricter set of review standards than those projects reviewed under CEQA. Federal-related projects include all drainage improvements in which the U.S. Army Corps of Engineers is involved.

- 6.15f Work with the State Office of Historic Preservation to conduct a formal, comprehensive inventory of historic resources in the built environment; if warranted, expand the existing Historic District to include newly identified historic resources.

This inventory should define criteria for determining what is worth preserving, describe how to meet preservation objectives without undue restriction of development opportunities, and identify the potential for and suitability of exploiting currently undeveloped prehistoric or historic resources to increase tourist patronage.

- 6.15g Consult with qualified paleontologists to identify and protect the Oroville area's significant paleontologic resources.

Paleontologists in the Geology Department at CSU Chico are the closest local resources. The Paleontology Department at UC Berkeley contains records of Northern California paleontologic resource inventories performed and collections maintained.

6.16 AIR QUALITY

Sacramento Valley Air Basin. Oroville is part of the Sacramento Valley Air Basin, which shares the "airshed" with cities that belong to Butte, Sacramento, Yolo, Colusa, Sutter, Yuba, Glenn, Tehama, Shasta, and parts of Solano and Placer counties. The Sacramento Air Quality Maintenance Area (AQMA), which is south of Butte County, has a serious air quality problem, and the AQMA violates the National Ambient Air Quality Standard for ozone about 10 days per year, and the stricter California standard about 35 times per year.⁸ The Sacramento AQMA is considered a non-attainment area for ozone. Oroville, although north of the Sacramento AQMA, may suffer some transfer of pollutants, and is subjected to some of the same air quality concerns, due to its position along the edge of the Central Valley.

During the summer, the wide, flat expanse of the Valley provides an ideal environment for the formation of photochemical smog. Hot, cloudless days of low velocity winds allow sunlight to combine with photochemically reactive hydrocarbons (also known as reactive organic gases) and nitrogen oxides produced throughout the Valley, resulting in an increase in ozone, particularly in the late afternoons. Winds arising later may help dispel the pollutants, but may also transfer it to other areas, including Oroville.

Air Quality Monitoring. The California Air Resources Board (CARB) has established 13 regional air basins representing areas of similar meteorological conditions to monitor and control air quality. Oroville falls under the jurisdiction of the Butte County Air Pollution Control District (APCD). Together with CARB, the APCD maintains and operates a regional air quality monitoring network in order to gauge progress toward attaining Federal and State ambient air quality standards.

There are no monitoring stations within the Oroville Planning Area. The closest stations are in Chico, Gridley, and Biggs. Both of the two Chico stations measure carbon monoxide, while one of the Chico stations also measures ozone. The Gridley station measures coefficient of haze and visibility-reducing particles, and the Biggs station measures particulate matter. For a definition of each of these pollutants, see below.

According to the APCD, the ozone (O₃) monitoring done at Chico is regionally representative, and ozone measurements from Chico would reflect conditions in Oroville. In 1989, the

Chico station recorded four exceedances of the State standard, two in April, one in July, and one in October; in 1990 the Chico station exceeded the standard on two days, both of which were in August, during a period of wildfires in Tehama County, which is thought to have affected air quality.⁹

The extent of carbon monoxide (CO) presence in Oroville, a gas which does not tend to persist and is rapidly dispersed within the area in which it was produced, cannot be inferred from measurements at the Chico station. According to the APCD, the lack of a station in the Oroville area implies that it has not historically been a problem.

Particulate matter (PM₁₀) can be a regional problem, although wind direction and velocity play a significant role in determining whether measurement stations in Chico or Biggs are representative of Oroville conditions. Oroville's position between the two suggests that exceedances at both stations would indicate an exceedance at Oroville, but exceedances at one or the other may or may not reflect exceedances at Oroville. In 1989, the Chico and Biggs stations each recorded eight exceedances of the State particulate matter standards; in 1990, the Biggs station recorded one exceedance, and the Chico station recorded thirteen.

The Gridley station and one of the Chico stations measure coefficient of haze (COH). The measure of COH may be generalized from Gridley to the Oroville area, although, since it is a measure of particulate matter, COH may depend on wind direction and velocity. The average monthly recordings at these two stations tends to be of relatively clean and particulate-free air. However, occasionally a high measurement is recorded representing a relatively high concentration of combustion-caused particulate.

Regulatory Framework and Butte County Non-Attainment Area Plan. The Federal Clean Air Act, promulgated in 1970 and amended twice thereafter (including the 1990 amendment), establishes the framework for modern air pollution control. The Act directs the Environmental Protection Agency (EPA) to establish ambient air standards for six pollutants: Ozone, Carbon Monoxide, Lead, Nitrogen Dioxide, Particulate Matter and Sulphur Dioxide. The standards (National Ambient Air Quality Standards, or NAAQS) are divided into primary and secondary standards; the former are set to protect human health within an adequate margin of safety and the latter to protect environmental values such as plant and animal life. In addition to the six pollutants regulated by Federal legislation, the California Clean Air Act (1988) establishes standards for Hydrogen Sulphide, Sulphates and Vinyl Chloride.

The Federal Clean Air Act requires states to submit a State Implementation Plan (SIP) for areas that exceed the NAAQS (called "nonattainment areas"). The SIP, which is reviewed and approved by the EPA, must demonstrate how the Federal standards will be achieved. Failure to submit a plan or secure approval could lead to denial of Federal funding and permits for such improvements as highway construction and sewage treatment plants. In cases where the SIP is submitted but fails to demonstrate achievement of the standards, the EPA is directed to prepare a Federal Implementation Plan. Responsibility for achieving California's standards — which are more stringent than Federal standards — is placed on the California Air Resources Board (CARB) and local air pollution control districts, and is to be achieved through a district-level Air Quality Management Plan (AQMP) (also known as a Non-Attainment Area Plan), that will be incorporated into the SIP.

In addition, the California Clean Air Act (1988) requires local and regional air pollution control districts that are not attaining one or more of the State ambient air quality standards for Ozone, Carbon Monoxide, Sulfur Dioxide, or Nitrogen Dioxide to adopt plans for attaining these standards as expeditiously as practicable. Each plan must be designed to achieve an annual five percent reduction in districtwide emissions of each nonattainment pollutant or its precursors.

Butte County is classified as a State and Federal nonattainment area for ozone, a State nonattainment area for PM_{10} , and a State and Federal nonattainment area for carbon monoxide in the Chico Urban Area. Its non-attainment area plan is known as the *Northern Sacramento Air Basin's 1991 Air Quality Attainment Plan* (adopted November 19, 1991). Implementation of this *Attainment Plan* is not expected to achieve the required five percent reduction of pollutant levels due in large part to the fact that 40 to 50 percent of the pollutants which ultimately reside within Butte County are actually generated in the urbanized areas to the south and transferred north via wind patterns. According to the District, the most significant action to reduce emissions is the requirement that vehicle owners participate in a "smog check" program, with vehicle inspections and performance assessment every other year. In addition to Transportation Control Measures, the Air Quality Attainment Plan includes New Source Review Rule and Indirect Source Review measures.

Pollutants and sources of pollution. Air pollutants produced or experienced by residents of the Oroville Planning Area include ozone, carbon monoxide, particulate matter, "haze," and toxic pollutants.

Ozone (O_3), also known as "smog", is not emitted directly into the environment, but is formed by complex chemicals in the atmosphere, in the presence of sunlight. The main sources of ozone precursors are combustion processes, and evaporation of solvents, paints, and fuels. As described above, some of Butte County's ozone problem can be attributed to transfer from the Sacramento AQMA. However, local activities also produce ozone precursors.

Combustion process emission sources within Butte County include the engines of 150,000 motor vehicles, agricultural waste burning conducted primarily in the Fall, and the ongoing use of wood stoves in residences. Ozone precursors are also produced from the application of pesticides and herbicides. Ozone can irritate the eyes, aggravate respiratory disease, reduce visibility, and damage vegetation.

Carbon monoxide (CO) is an odorless, colorless gas which is formed by the incomplete combustion of fuels. A primary source of CO emissions is motor vehicles, and CO concentrations are generally highest near heavily-travelled roadways. At high concentrations, CO can aggravate cardiovascular disease, cause headaches, dizziness, unconsciousness, or death.

Particulate matter of a size ten microns or less (PM_{10}) refers to a wide range of solid or liquid particles in the atmosphere, including smoke, dust, pollen, aerosols, and metallic oxides. The tinier particles are of greater concern than the larger particles, since they are more easily inhaled. Agricultural waste burning produces particulates, as do wildfires and wood stoves, backyard and outdoor burning, construction, grading, and demolition. "Haze" can be indicative of deteriorated air quality as a result of the presence of particulate matter. The "coefficient of haze" is measured by collecting particulate matter on a tape sampler and measuring the amount of light which can be transmitted through the tape.

Toxic air contaminants have received increasing scrutiny in recent years. Aerial application of pesticides and herbicides can adversely affect air quality within the treatment vicinity. Within the Oroville Planning Area, for example, the soil and groundwater contamination associated with the Koppers Company Feather River Plant (now owned by Beazer) may have some air quality impacts, in the potential for inhalation of contaminated airborne dusts.¹⁰

Objective: Air Quality

- 6.16a Strive to meet all State and Federal ambient air quality standards.

Implementing Policies: Air Quality

- 6.16b Cooperate with the Butte County Air Pollution Control District to achieve the five percent annual emissions reductions for nonattainment pollutants, including ozone and particulate matter, by implementation of air pollution control measures as required by State and Federal standards.

The Northern Sacramento Air Basin's 1991 Air Quality Attainment Plan is written with the intention of attaining State standards at the earliest practicable date. Although the Plan does not demonstrate a five percent reduction of pollutant levels, it does include every feasible control measure, and a schedule of adoption of the control measures. Control measures include a new Source Review Rule, Indirect Source Review, and Transportation Control Measures. The Attainment Plan does not directly address new Federal planning requirements; since the Plan is anticipated to eventually result in the attainment of compliance with the more rigorous State ambient air quality standards, Federal requirements are expected to be met as well. The district is required to update the Plan every three years.

- 6.16c Cooperate with the Butte County Air Pollution Control District to implement public education measures outlined in the 1991 Air Quality Attainment Plan.

Measures are divided into three categories, including community contact, education, and public information. Community contact measures include the occurrence of community events that promote clean air, such as participating in Rideshare Week/Rideshare Fair displays, public presentations for interested community organizations and schools, and public workshops to present proposed strategies and programs. Educational programs include the continued development of multimedia presentations and public displays, development and dissemination of public information materials, and development of advertising and promotion spots. Public information programs include continued development of local media relations, involvement of the community in brainstorming workshops to develop regulations and strategies, coordination with and provision of information to local organizations and schools, and development and coordination of an Advisory Program with local schools and media for health alert advisory episodes.

- 6.16d Support planning measures in the Sacramento area that would result in a net decrease in the production of ozone precursors and other wind-transported pollutants that ultimately affect air quality in the Oroville Planning Area.

The City has little opportunity to address the pollutant transfer issue in an active manner, although it may submit comments in support of or protesting proposed projects in the region during the environmental review process.

- 6.16e Encourage the use of transit facilities, carpooling and other alternatives to the car throughout the planning area.

Increased use of transit and carpooling can lead to a decrease in daily trips, less emissions, and improved air quality. See also Policies in Section 5.30 of the Circulation Element.

6.20 OPEN SPACE FOR THE MANAGED PRODUCTION OF RESOURCES

Agricultural lands and lands containing mineral resources are the two types of open space within the Planning Area to be preserved for the managed production of resources. Preservation of fisheries is considered in Section 6.11, under Biotic Resources. Areas required for the recharge of groundwater are considered part of the flood plain, and policies on the preservation of these areas are found in Section 8.20. Although Butte County contains significant timber resources — much of which is processed in Oroville — the Oroville Planning Area does not contain any Timberland Zoning Districts.

6.21 AGRICULTURE

OVERVIEW

Regional setting. California, the nation's leading agricultural state, contains about three percent of the agricultural land within the United States, and typically yields about ten percent of total national farm income.¹¹ The State produces over 99 percent of the nation's olives, almonds, walnuts, and prunes. These are the four orchard crops covering the greatest acreage in Butte County, and are four of the six highest value orchard crops produced in the County in 1992.¹²

In 1992, Butte County ranked nineteenth in the State in total agricultural production values (including timber).¹³ Butte County crops ranked among the leading five counties in the State (by value) for rice (ranked second in the State), English walnuts (ranked third), prunes (ranked second), olives (ranked fifth), and almonds (ranked fourth).

Regional concerns. Major farmland resource problems facing agriculture in California include the conversion of farmland to urban area, soil erosion, salinity, and possible shortages of affordable water. Occasional freezes pose a threat to citrus throughout the State. Soil salinity has not been identified

as a problem in the Oroville Planning Area. The others are concerns of varying degree within the Oroville Planning Area, as identified by farm advisors of Butte County Cooperative Extension in Oroville.

Between 1986 and 1992, the Department of Conservation noted a loss of 3,363 acres of agricultural lands (including both farmlands and grazing lands) in Butte County, and an increase of 2,491 acres of urban and built-up land.¹⁴ Land conversion in the Oroville Planning Area has not been quantified.

According to a Department of Conservation Survey, over 12 percent of the cropland in the Central Valley from Oroville south has erosion problems.¹⁵ Erosion problems in orchard lands occur primarily in the Sierra foothills. This is a potential problem in the Oroville foothills, and in any portion of the Planning Area with slopes over five percent.¹⁶ To combat the problem, farmers use drip irrigation systems or low-output sprinklers, intended to minimize surface runoff.

Despite the presence of huge volumes of stored water just upstream, much of the Planning Area receives no water directly from Lake Oroville and the State Water Project. The Oroville Wyandotte Irrigation District (OWID), which serves southern and eastern Oroville, for example, gets its water from the South Fork of the Feather River. OWID agricultural water users are concerned about the availability of affordable water. Farmers must buy treated water where there is no system for distributing untreated water. This is a concern for the future of agriculture in the area, since agricultural uses will not persist if water costs become prohibitive.

Freezes, such as that of 1990, can cause devastating citrus losses, and mandarin and orange trees within the Planning Area were affected. Due to micro-climates created by varying topography, freeze damage differs throughout the region.

SOIL CAPABILITIES AND LIMITATIONS

Availability of soils data. The Farmland Mapping and Monitoring Program (FMMP), begun in 1980 and administered by the State Department of Conservation, is developing an inventory of California's farmland based on data provided by the USDA Soil Conservation Service (SCS) and the State Department of Water Resources. This inventory, known as the Important Farmland Series, will ultimately show urban areas and agricultural land of various types and of varying importance, including prime farmland, farmland of statewide importance, unique farmland, and farmland of local importance.

Butte County is one of several counties for which the SCS has not completed the surveys on which the State maps are based. The FMMP has prepared Interim Farmland Maps for those counties lacking modern soil surveys. Interim mapping categories are "irrigated" and "non-irrigated" farmland in place of prime, statewide, unique, and locally important farmland, with "grazing land" and "urban and built-up land" used in the same way that these categories are used in the Important Farmland Series.

Of 918,023 acres inventoried within Butte County in 1992, 260,208 acres (28 percent) were irrigated farmland, 9,894 (one percent) were non-irrigated farmland, 266,296 (29 percent) were grazing land, 37,124 (four percent) were urban and built-up land, 323,805 (35 percent) were other lands, and 20,696 acres (two percent) were water areas. While precise totals for the Oroville Planning Area are not available, EIR Figure 3.9-A shows the extent of irrigated and non-irrigated farmland.

Definitions of "prime." Various definitions of "prime farmland" have evolved at the local, regional, State, and Federal levels. The Farmland Mapping and Monitoring Program's definition of prime farmlands is "lands with the best combination of physical and chemical features for the production of agricultural crops." However, these lands have not yet been mapped within Butte County.

The definition associated with the Williamson Act, established by the legislature in 1965 to protect the best agricultural lands from urban conversion pressures, allows the incorporation of several measures in an assessment of what prime agricultural land is. According to the Butte County Draft Energy, Natural Resources, and Recreation Element, a few tiny pockets of soil within the Oroville Planning Area are classified as Class I or Class II. Under the Williamson Act definition, these would be considered prime agricultural lands. Most of the soils, however, are Class IV and Class VII, of anticipated lower or limited productivity. The U.C. Cooperative Extension office in Oroville confirms that there are lands under Williamson Act contract in the Planning Area.

AGRICULTURE IN THE PLANNING AREA

Few Planning Area residents depend solely on agriculture for their livelihood and those who do may be engaged primarily in rice farming outside the Planning Area. Agriculture is, nonetheless, a significant presence within the Planning Area.

Orchard crops. While a survey of orchard lands within the Planning Area has not been performed to determine the precise plantings, it is known that olives and citrus (Owari Satsuma mandarins and Navel oranges) are well represented.¹⁷ Olives, oranges, mandarins and tangerines have all had significant production within the Oroville Planning Area, and have remained constant over the last few years within the County. Actual production has increased for olives, mandarins and tangerines, while decreasing slightly for oranges. About six percent of California's olives came from Butte County in 1992, and a significant amount of the olives and citrus grown in Butte County are grown either within the Oroville Planning Area, or just outside.¹⁸ In 1992 Butte County produced 10,465 tons of olives on 2,754 acres, at a value of \$6,248,000 (\$2,268 per acre).

Most farmers growing olives and citrus in the foothills are small farmers, and all of these are family farms. The Ehmann Olive Company operates an olive cannery in the Oroville area and estimates that between 10 and 15 percent of their olives are obtained locally.

South of the Planning Area and west of the Feather River are orchards of prunes, walnuts, almonds, and kiwis. North of the Planning Area there is a significant acreage of olives, peaches, and apricots along Coal Canyon Road.

Grazing. Butte County ranked second behind Modoc County, in the northern half of the State for production of cattle and calves, by value, which totaled \$15,115,000 in 1989. However, in 1992 Butte County ranked eighth among north state counties with \$5,971,000 in production value. According to representatives from the Butte County Agricultural Commissioner's Office, such fluctuations in cattle production are fairly typical and caused by various factors such as prolonged drought conditions and decreases in the demand for beef. Grazing lands in the Planning Area are concentrated in large swaths of land north and west of the City. Other areas include lands south of the Feather River and south of the

dredge tailings, south of Pacific Heights Road and south of the Baggett-Marysville Highway, and south of Monte Vista Avenue. There are smaller discontinuous parcels devoted to livestock production scattered throughout the eastern foothills. The U.C. Cooperative Extension office in Oroville estimates that there are 2,000-3,000 head of grazing animals within the Planning Area at any given time, especially in the northwestern area, and some in the foothills.

The U.C. Cooperative Extension's Hardwood-Rangeland Management Program aims to balance livestock grazing needs with management of trees, especially the Blue Oak, and other considerations, such as fire protection and erosion concerns. One of their goals is to maintain 25 to 40 percent canopy cover in grazing land areas where the Blue Oak grows.

Field crops. The leading field crop produced in Butte County in 1992 was rice, valued at \$69,579,000.¹⁹ Butte County ranked second in the State for rice production, by value, grossing 20.5 percent of the State's total. Rice is the main field crop found in the Oroville area, and is grown on the leveled land found in the northwest corner of the Planning Area and along Highway 99.

Objectives: Agriculture

- 6.21a Retain the maximum feasible amount of agricultural production space for its contributions to the local economy, lifestyle, air quality, habitat value and sense of Oroville's heritage.
- 6.21b Encourage the Soil Conservation Service to locate a unit in Butte County, and/or to complete soils mapping efforts within the Planning Area.

No comprehensive soil survey for the Oroville area has been performed. Such a survey would be useful in determining the relative values of Planning Area soils.

Implementing Policies: Agriculture

- 6.21c Support the OWID & TID investigations of the need, availability and cost of irrigation water to support agriculture within the Planning Area and determine whether feasible public or private actions are needed to support/supplement agriculture.

General Plan studies have not gone beyond a determination that some orchard owners are paying domestic water rates or are not irrigating their orchards. See also Policy 3.30g of the Land Use Element, on orchard preservation.

- 6.21d Encourage or require transfer of residential density from orchards to sites within the same parcel or adjoining parcels.

Smaller lots have much lower improvement costs and could enable new homebuyers to enjoy the orchard landscape while maintaining the efficiency of a single orchard ownership. See also Policy 3.30g of the Land Use Element, on transfer of density.

- 6.21e Assist, if appropriate, orchard owners in obtaining contracts under the Williamson Act to ensure property taxation based on agricultural value, not development value.

Some orchards currently are under Williamson Act contracts that require 10 years' notice of intent to change the use. Tax savings will increase as surrounding land values rise or the property is sold.

- 6.21f Encourage the formation of a local land trust or solicit the interest of an existing land trust experienced in acquiring agricultural land and open space in California.

Sale below appraised market value ("bargain sale") to a nonprofit land trust that subsequently conveys the property to a public agency can provide attractive tax savings to a seller. Assistance in forming a land trust is available from the Trust for Public Land or similar organizations.

6.22 MINERAL RESOURCES

Regional setting. Sand and gravel, stone, and gold mining are the three primary mining industries in Butte County. Of these, the Butte County Draft Energy, Natural Resources, and Recreation Element identifies only sand and gravel operations as present within the Oroville Planning Area. Despite its historical importance, gold mining has dwindled to a negligible level within the Planning Area, although occasionally prospectors are seen locally.

Sand and gravel. Oroville's position within the "gravel belt" of Butte County, where sediments washed down from the Sierra Nevada reach the slower moving rivers of the flatter Central Valley, places it in an area of active gravel mining. Although historically these gravels were mined for gold content, today the gravels themselves are valued, as are sands within the deposits, to be used in combination with portland cement or asphalt compounds in construction and road building. Sand and gravel deposits are also mined for silica, used in the production of cleansers, abrasives, and toothpaste. There are currently two sand and gravel operations located just north of the Planning Area. One is located on the west side of Table Mountain between Coal Canyon and Cottonwood Roads. The other, which is strictly a sand mining operation, is located on the east side of Cherokee Road in the Morris Ravine Area between North and South Table Mountain. This second mine was approved in 1993 but is not yet operational. All of the sand and gravel mining operations within the Planning Area are located south of Oroville, adjacent to or east of the Feather River.

Regional or statewide significance. Urban preemption of prime deposits and conflicts between mining and other uses throughout California led to passage of the Surface Mining and Reclamation Act of 1975 (SMARA). This Act establishes policies for conservation and development of mineral lands, and contains specific provisions for the classification of mineral lands by the State Geologist.

SMARA requires all cities and counties to incorporate in their General Plans mapped designations approved by the State Mining and Geology Board. These designations include lands categorized as Mineral Resource Zones, the most significant of which is a designation of mineral resources

that are of regional or statewide significance. These categories must be recognized by the County in its General Plan, to establish policies and programs for the conservation and development of these resources.

The State Geologist has not yet mapped the mineral resources in Butte County. A policy in the Draft Butte County Energy, Natural Resources, and Recreation Element states that the County Board of Supervisors shall formally request that the State Division of Mines and Geology map mineral resources in Butte County of "Regional or Statewide Significance."²⁰ The Oroville General Plan reiterates this policy.

Objectives: Mineral Resources

- 6.22a Determine whether the Planning Area contains one or more significant mineral resources.
- 6.22b Coordinate mineral resource extraction with other land uses for the enhancement of the Planning Area.

Implementing Policies: Mineral Resources

- 6.22c Explore the appropriateness of a request that the State Division of Mines and Geology map Butte County mineral resources of "Regional or Statewide Significance."

The information provided by such mapping is needed to ensure the conservation and development of the Planning Area's mineral resources.

- 6.22d Once the State Division of Mines and Geology has mapped mineral resources of Regional or Statewide Significance, clearly identify on the General Plan Diagram mineral resource areas and those areas targeted for conservation and possible future extraction.

If such resources were discovered to exist where the General Plan Diagram shows development areas, a General Plan Amendment might be necessary to resolve the potentially conflicting uses.

- 6.22e Manage mineral resource extraction to ensure that this activity results in the fewest possible environmental impacts. Require preparation and assured implementation of a rehabilitation plan for mineral extraction sites as a condition of mining approval. The mineral resource plan should address the protection of biotic resources.

Mining is traditionally a high-impact industry that must adjust its operations to mitigate environmental impacts and become an acceptable neighbor to urban areas. As noted in Policy 6.11t, the rehabilitation plan should address the protection of biotic resources.

- 6.22f If aggregate mineral resources of Regional or Statewide Significance are identified within the Planning Area, apply zoning regulations permitting extraction as a conditional use and

prohibiting incompatible land uses in Regionally Significant Construction Aggregate Resource Areas to be conserved.

This policy meets a requirement of the Surface Mining and Reclamation Act (SMARA) of 1975.

- 6.22g If the State Division of Mines and Geology determines that the Planning Area contains significant aggregate resources, conserve sufficient aggregate resources to meet the Planning Area's fair share of future regional needs.

ENDNOTES

1. Department of Fish and Game, June 1994.
2. Regional Water Quality Control Board, June 13, 1994.
3. Regional Water Quality Control Board, *The Water Quality Control Plan (Basin Plan)*, Second Edition, March 1990, pp. IV-1 to IV-3; Woodward-Clyde Consultants, *Santa Clara Valley Nonpoint Source Control Program*, March 1990, pp. 2-1 to 2-2.
4. Erwin G. Gudde, *California Place Names: The Origin and Etymology of Current Geographical Names*, 1969, pp. 72-73.
5. Robert F. Heizer and Albert B. Elsasser, *The Natural World of the California Indians*, 1980, p. 30.
6. Erwin G. Gudde, *California Place Names: The Origin and Etymology of Current Geographical Names*, 1969, pp. 72-73, 273.
7. Donley, Allan, Caro, and Patton, *Atlas of California*, 1979, pp. 8-9.
8. Sacramento Area Council of Governments, *Regional Air Quality Plan*, 1990.
9. Butte County Air Pollution Control District, February 1991.
10. Koppers Company, *Update Newsletter*, March 1989, p.3.
11. American Farmland Trust. *Eroding Choices, Emerging Issues: The Condition of California's Agricultural Land Resources*, 1986, p. 79.
12. American Farmland Trust, *Eroding Choices, Emerging Issues: The Condition of California's Agricultural Land Resources*, 1986, p. 80; and, Butte County, *Agricultural Crop Report*, 1992; California Agricultural Statistics Service, *Summary of County Agricultural Commissioners' Reports*, 1992.
13. California Agricultural Statistics Service, *Summary of County Agricultural Commissioners' Reports*, 1992.
14. Department of Conservation, Farmland Mapping and Monitoring Program, Butte County, 1992, Land Use Conversion Tables.
15. Department of Conservation, *California Soils: An Assessment*, 1979, p.III - 18.
16. American Farmland Trust, *Eroding Choices, Emerging Issues: The Condition of California's Agricultural land Resources*, 1986, p. 37; U.C. Cooperative Extension, Butte County, March 1991.
17. UC Cooperative Extension, Oroville, February and March 1991.
18. UC Cooperative Extension, Oroville, February and March 1991.
19. California Agricultural Statistics Service, *Summary of County Agricultural Commissioners' Reports*, 1992.
20. Butte County, *General Plan Draft Energy, Natural Resources, and Recreation Element*, December 1989.

7.0 PUBLIC FACILITIES AND SERVICES ELEMENT

7 PUBLIC FACILITIES AND SERVICES ELEMENT

This Element sets forth objectives and implementing policies that relate to the establishment and coordination of public facilities within the local community. As an expression of policy and community awareness, this Element considers the following:

PARKS, RECREATION AND OPEN SPACE

- Existing and Future Facilities
- Coordination with other Recreational Plans
- Park Standards

TRAILS

- Bicycle Paths and Lanes
- Multi-Use Recreational Trails

EDUCATIONAL FACILITIES

- School District Boundaries
- Facility Locations and Resources
- Enrollment Sizes
- School Play Areas

WATER AND WASTEWATER FACILITIES

- Water Supply
- Wastewater Collection and Treatment

Policies regarding police and fire protection are contained within the Safety Element. Specific information relative to the bicycle system is addressed in the Circulation Element.

CONSISTENCY WITH STATE PLANNING LAW

The Public Facilities Element, in concert with the Land Use and Circulation Elements, establishes provisions for the coordination of public facilities necessary to meet the future needs of the community. A Public Facilities element is among those elements recommended by the State to be included as optional elements within a General Plan (Government Code Section 65303).

Corresponding with the provisions of this element, included below is a detailed discussion regarding several proposed multi-use recreational trails as an intricate component of the community's public facilities. Additionally, Public Resources Code Section 5076 requires that the consideration of local trails be included within the General Plan. Specifically, the legislative intent is as follows:

"In developing the open-space element of a general plan as specified in subdivision (e) of Section 65302 of the Government Code, every city and county shall consider demands for trail-oriented recreational use and shall consider such demands in developing specific open-space programs. Further, every city, county, and district shall consider the feasibility of integrating its trail routes with appropriate segments of the state system."

While the provisions of this element are more specific to the development and enhancement of parks, recreational opportunities and trails, they are intended to be used in conjunction with the resources identified in this General Plan. In this regard, a more comprehensive discussion of the preservation of open space and the conservation of natural resources is included within the Open Space, Natural Resources, and Conservation Element, as well as the relationship of trails to overall community circulation contained in the Circulation Element.

Based upon the above, this Element has been prepared in conformance with the recommendations of the Government Code, and the requirements of the Public Resources Code.

7.10 PARKS, RECREATION, AND OPEN SPACE

Local and regional recreational opportunities for Oroville residents and visitors abound. Region-serving facilities in the Oroville Planning Area are under the jurisdiction of the State of California. Within or overlapping into the Planning Area, these include 29,000 acres of the State Recreation Area's water-related facilities (the surface of Lake Oroville itself accounts for 16,400 of those acres), managed by the State Department of Parks and Recreation (DPR). The 5,500-acre State Wildlife Refuge is operated by the Department of Fish and Game (DFG). The DFG also runs the Feather River Fish Hatchery, a regional attractor. Just outside of the Planning Area, Lake Oroville and the Plumas National Forest offer additional activity.

Popular activities within the State Recreation Area (SRA) include all types of boating, shore and water-based fishing, and camping. Popular activities within the Wildlife Refuge include boating, fishing, hunting, and nature study.

In addition to abundant use of region-serving facilities, residents take advantage of neighborhood and community park facilities. The City of Oroville Department of Parks and Trees (DPT), the Feather River Recreation and Park District (FRRPD), and local school districts own and operate local-

serving park and recreation lands. Existing and proposed parks and recreation areas and open space lands are described in Table 7.10-A and are shown on GP Figure 7.10-A; bikeways and trails are shown on GP Figure 5.40-A.

PARK AND RECREATION PROVIDERS, THEIR EXISTING AND FUTURE FACILITIES, AND THEIR PLANS

City of Oroville Department of Parks and Trees (DPT). As of 1994, the DPT owns and operates about 20 acres of neighborhood parks within the City. Most of these existing facilities are clustered near downtown, within a mile of each other. The proposed park system would add to the Planning Area 11 neighborhood parks and three community parks (and would expand the existing community-sized Nelson Park, which is owned and maintained by the FRRPD). The 14 new facilities would be owned and/or managed by the City and/or the FRRPD. Neighborhood parks are assumed to average 8 acres. Proposed community parks in Thermalito and the Foothills sector are shown as 20 acres; the Southside Park — the most centrally located large park in the Planning Area — is 40 acres.

Existing and proposed neighborhood and community parks of greater than two acres are shown on the General Plan Diagram; the smaller sites of the Chinese Temple and Lott Home/Sank Park are also shown. The general location of proposed parks is shown in circles, scaled to the approximate acreage of the facility. At some locations, more than one site in the vicinity of the symbol may be appropriate and could be approved without amending the General Plan.

National standards call for a neighborhood or community park within three-eighths of a mile to a half mile of each child's home, but this is not practical in lower density portions of the Planning Area.

Feather River Recreation and Park District (FRRPD). The District, established in 1952, encompasses 700 square miles of southeastern Butte County, and owns or leases ten park sites and facilities totaling 88 acres. Seven of these sites are within the Oroville Planning Area, totaling 58 acres. The FRRPD also offers a variety of recreation programs, including leisure services, aquatics, and sports. Property tax revenues fund the FRRPD, and are supplemented by user fees. Where feasible, given planned land uses in an area, proposed parks shown on the General Plan Diagram reflect incorporation of preferred park sites and park distribution as described in the FRRPD's Master Plan (1984-1994) and in subsequent conversations with the District.

The River Bend Park site encompasses about 60 acres, plus an additional 60 acres of potential land to the south. According to the FRRPD's (1993) Master Development Plan for River Bend Park, proposed facilities include:

- A natural area/riparian enhancement project;
- Open space/landscaped areas;

- Picnic areas;
- A bicycle staging area;
- Walking, jogging, and bicycle paths and roads;
- A museum/nature/recreation center;
- Restrooms and parking areas;
- A kiosk which would function as a main entrance booth, and
- A special use area consisting of one or two restaurants and various small shops that would support the leisure and recreational opportunities provided at the park.

The Nelson Park addition is approximately 54 acres, and would function as community park land.

State Department of Parks and Recreation (DPR). The State DPR operates the Lake Oroville State Recreation Area (SRA), which is part of the State Parks system. The SRA Resource Management Plan and General Development Plan (August 1973) guides development of these facilities. Since the facilities that comprise the SRA serve several overlapping roles, management of the area is multijurisdictional, and the DPR coordinates the SRA management with several agencies.

The Federal Power Commission licenses the State Water Project (of which Lake Oroville is the principal reservoir) and sets primary controls, including lake level. The Army Corps of Engineers is involved with flood control issues. The Department of Water Resources (DWR) operates the State Water Project. The DFG, like the State DPR, has a contract with DWR to carry out a specialized activity: habitat preservation and enhancement at the Fish Hatchery. Thus, recreational needs are balanced with and coordinated among agencies to meet objectives for energy production and water provision, flood control, and habitat preservation and enhancement.

State DPR facilities within the Planning Area are shown on Figure 7.10-A, and include the Kelly Ridge Visitor's Center, Bidwell Canyon, Thermalito Diversion Pool, Thermalito Forebay, Thermalito Afterbay, and the Spillway Boat Ramp. Oroville Dam and Oroville Lake are located just outside of the Planning Area, although they are part of the Area's recreational resources. Total area of SRA parkland within the Planning Area has not been calculated. There are about eight linear miles of formally recognized, named trails within the Planning Area, and an additional 13 miles in the vicinity.

The Lake Oroville District of DPR has noted that development of Highway 162 east of the Oroville Planning Area would improve access to U.S. Forest Service lands. With those undeveloped lands available for public uses, Oroville's role would be enhanced as a gateway to a new recreational region.

California Department of Fish and Game (DFG). The Oroville Wildlife Area and Fish Hatchery are operated by the DFG. The mandate of the DFG is to preserve and enhance fish and wildlife resources for use and enjoyment by the public. Public use and enjoyment of these resources includes

recreational opportunities such as wildlife observation and nature study, fishing, hunting, hiking, picnicking, swimming, and horseback riding.

The Oroville Wildlife Area Management Plan (1978) inventoried opportunities and specified general objectives for the area, including plans for construction of recreation-enhancing facilities. According to the DFG, this plan was most recently updated in 1992. Future plans for the Fish Hatchery may include modifications in the operation of the facility which would not be anticipated to affect its recreational uses.

PARK TYPES

There are seven types of parks in the Planning Area: neighborhood, community, special, regional, and school-related facilities; linear "parks" such as those appropriate for traversing corridors (adjacent to waterways, utility rights-of-way, along ridges or the base of bluffs); and mini-parks. Table 7.10-A identifies and describes the existing and future park and recreation facilities within the Planning Area. (The category of "future" encompasses sites ranging across a broad spectrum, from those that are owned, to those for which sites are leased, to those which are desired for lease or acquisition.) Table 7.10-A also shows those areas to be preserved as open space that are not planned for development as parks.

Neighborhood and community. Neighborhood and community parks are primarily local-serving. Eleven new neighborhood parks, three community parks, and significant expansion of one community park are proposed as a part of the 1994 General Plan update as described in Table 7.10-A. As their name implies, neighborhood parks, of which there are six in the Planning Area (1994) ranging in size from about two to eight acres, serve their immediate surroundings.

Community parks typically serve a population of 10,000 or more and have facilities for all age groups. The two community-sized parks within the Planning Area are Nelson Park (29.6 acres) and Mitchell Park (15.27 acres), which is adjoined by 8.6-acre Harrison Stadium. Many residents are attracted to Nelson and Mitchell parks solely for their sports fields. Because of the heavy use of their sports facilities, these facilities might be functionally considered to be in both the "community parks" and "special facilities" categories. The General Plan Diagram shows expansion of Nelson Park to the west, adding about 54 acres.

Special. "Special facilities" is a catch-all category that includes park sites comprised solely of buildings or artifacts of historic interest, specialized sports facilities (stadiums, tennis courts, golf courses), and the municipal auditorium. These facilities are of both local and regional interest. Some of these facilities serve a function similar to neighborhood or community parks. No new "special facilities" are proposed as part of the 1994 General Plan Update, although the 60-acre River Bend site might be developed in the future as a special facility.

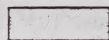
OROVILLE PLANNING AREA

Parks and Open Space

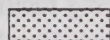
GP Figure 7.10-A



Parks¹



State Water
Project Lands



Open Space

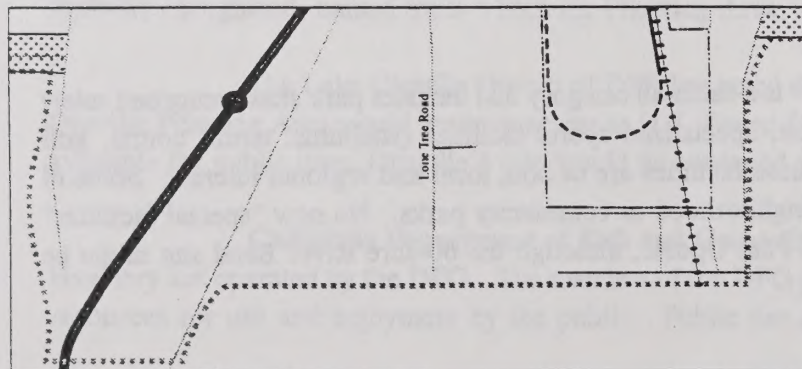


City Limits

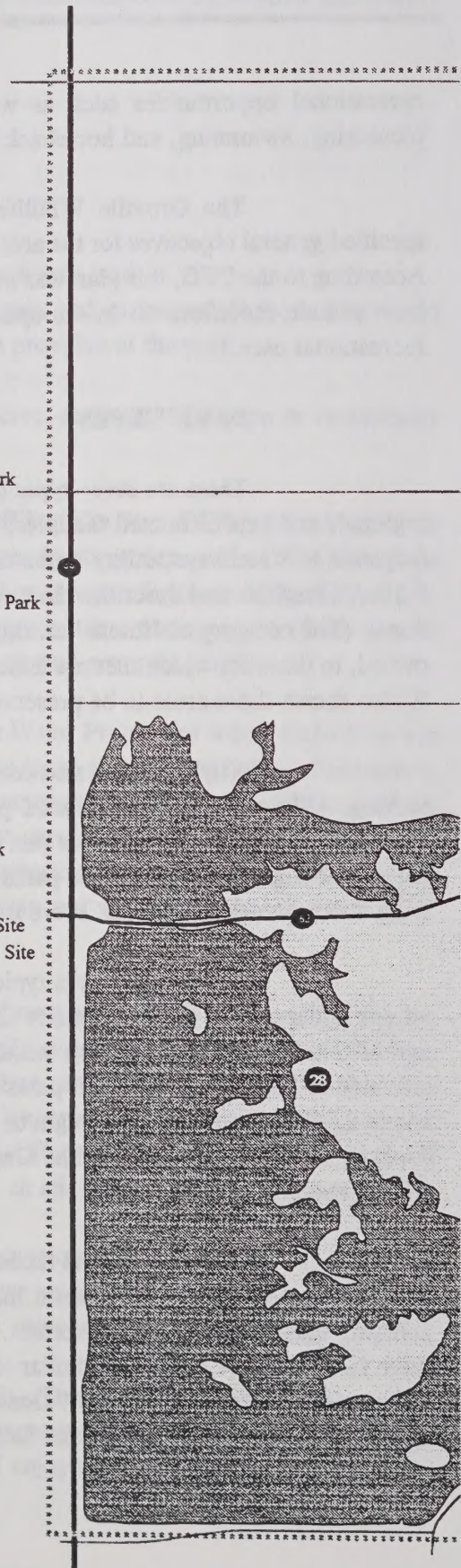
- | | |
|---------------------------------------|--|
| 1 Bedrock Park | 31 Thermalito Forebay South |
| 2 Bedrock Tennis Courts | 32 Wyandotte Park |
| 3 Bidwell Canyon | 33 Grand Ave. Community Park |
| 4 Chinese Temple | 34 So. of Nelson, West of 12th St.
Neighborhood Park |
| 5 Dan Beebe Trail | 35 River Bend Neighborhood Park |
| 7 Feather River | 36 Garden Drive Vicinity Neighborhood Park |
| 8 Feather River Fish Hatchery | 37 East of Fish Barrier Dam Vicinity
Neighborhood Park |
| 9 Feather River Parkway | 38 Linda Loma Dr./Buehler Ave./Olive
Highway Vicinity Neighborhood Park |
| 10 River Bend Park | 39 Riverview Drive Vicinity Neighborhood Park |
| 11 River Bend Park Addition | 40 Olive-Oakdale Community Park |
| 12 Hammon Park | 41 Mount Ida/Miner's Ranch Road Vicinity
Neighborhood Park |
| 13 Harrison Stadium | 42 Mount Ida-Oakdale Ave. Vicinity
Neighborhood Park |
| 14 Hewitt Park | 43 East-of-Wyman Ravine/South-of-
Mount Ida Road Neighborhood Park |
| 15 Kelly Ridge Golf Links | 44 South of Monte Vista Ave. Vicinity
Neighborhood Park |
| 16 Kelly Ridge Visitor Center Complex | 45 South Side-Las Plumas Community Park |
| 17 Lake Oroville | 46 Oroville Garden Ranch Road,
Brookdale Drive Neighborhood Park |
| 18 Lott-Sank Park | 47 Wyman Ravine Open Space, Northeast Site |
| 19 Martin Luther King Jr. Park | 48 Wyman Ravine Open Space, Southwest Site |
| 20 Mitchell Park | 49 Thermalito Diversion Pool/
Sycamore Hill Area Open Space |
| 21 Municipal Auditorium | 50 Thermalito Power Canal/
Thompson Flat Open Space |
| 22 Nelson Park | 51 Deer Creek Open Space |
| 23 Nelson Park Addition | |
| 24 Oroville State Wildlife Area | |
| 25 Rotary Park | |
| 26 Spillway Boat Ramp | |
| 27 Table Mountain Golf Course | |
| 28 Thermalito Afterbay | |
| 29 Thermalito Diversion Pool | |
| 30 Thermalito Forebay North | |

¹Map ID numbers are keyed to Table 7.10-A

Sources: City of Oroville Dept. of Parks and
Trees; FRRPD; State Dept. of Parks and
Recreation; Cash Colby's Pro-Guide Fishing
and Recreation Maps.

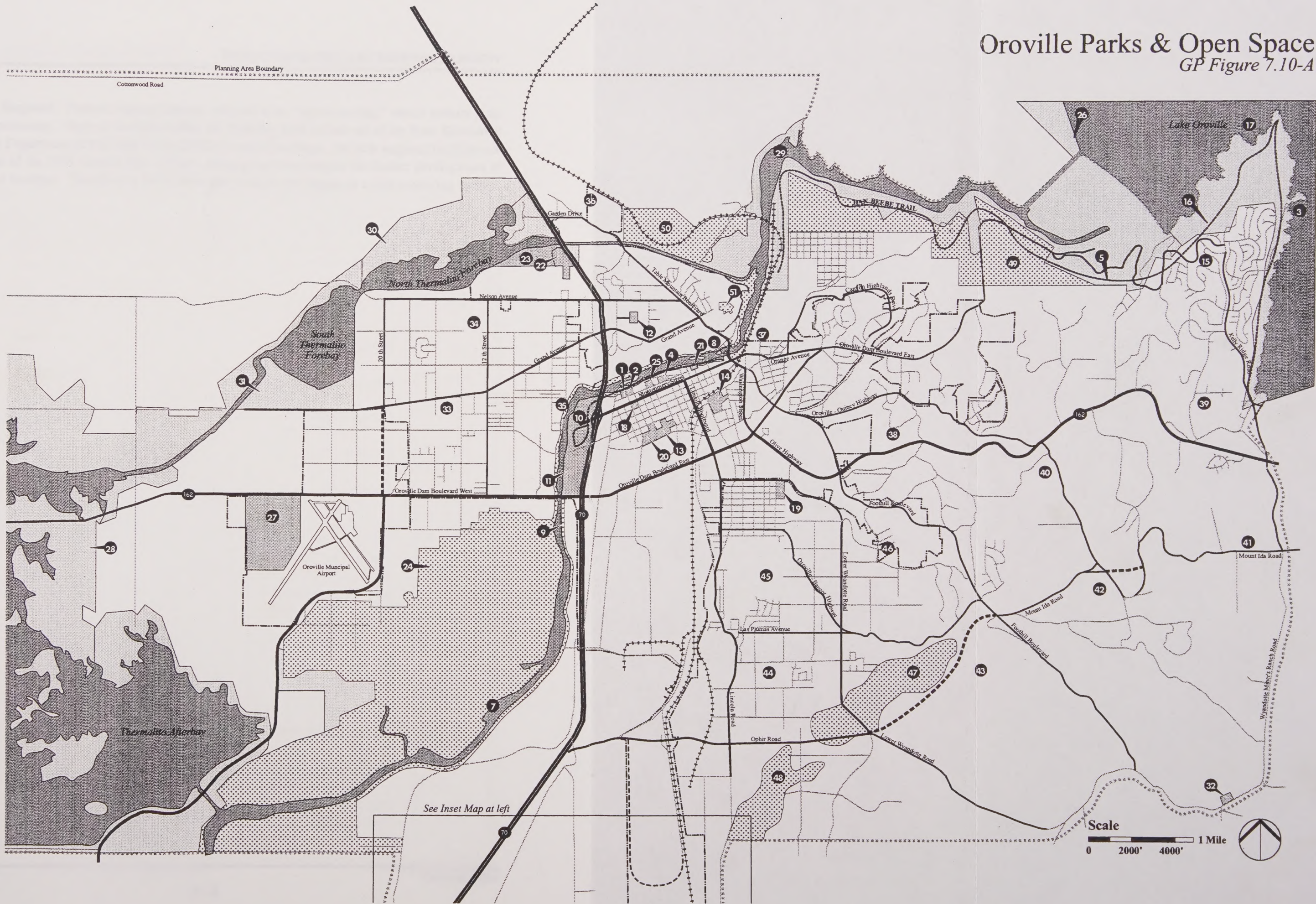


Southern extension of Planning Area



Oroville Parks & Open Space

GP Figure 7.10-A



**TABLE 7.10-A
EXISTING AND PROPOSED
PARK AND RECREATION FACILITIES AND OTHER OPEN SPACE LANDS
IN THE OROVILLE PLANNING AREA**

Map ID ¹	Facility Name	Type ²	Owned and Operated by	Size
	Existing Facilities (1992):			
1	Bedrock Park	N	City	2.24 acres
2	Bedrock Tennis Courts	S	FRRPD	3.75 acres
3	Bidwell Canyon	R	SRA	NA
4	Chinese Temple	S	City	.91 acres
5	Dan Beebe Trail	L	SRA	8.5 miles
7	Feather River	R	DWR, DFG, SRA, State Lands Commission	NA
8	Feather River Fish Hatchery	R	DFG	NA
9	Feather River Parkway	L	FRRPD, City	3.5 miles
12	Hammon Park	N	City	5.5 acres
13	Harrison Stadium	S	Oroville Union High School District	8.6 acres
14	Hewitt Park	N	City	7.55 acres
15	Kelly Ridge Golf Links	S	private ⁴	51.51 acres
16	Kelly Ridge and Visitor Center Complex	R	SRA	NA

**TABLE 7.10-A
EXISTING AND PROPOSED
PARK AND RECREATION FACILITIES AND OTHER OPEN SPACE LANDS
IN THE OROVILLE PLANNING AREA**

Map ID ¹	Facility Name	Type ²	Owned and Operated by	Size
17	Lake Oroville	R	SRA	16,400 acres
18	Lott Home/Sank Park	S	City	1.96 acres
19	Martin Luther King Jr. Park	N	FRRPD	5.5 acres
20	Mitchell Park	C(S)	FRRPD	15.27 acres
21	Municipal Auditorium	S	FRRPD (leased from City)	1.16 acres (10,000 sq.ft. community center)
22	Nelson Park	C(S)	FRRPD	29.6 acres
24	Oroville State Wildlife Area	R	DFG	5,500 acres
25	Rotary Park	N	City	2.14 acres
26	Spillway Boat Ramp	R	SRA	NA
27	Table Mountain Golf Course	S	City-owned, privately operated ⁴	244 acres
28	Thermalito Afterbay	R	SRA	750 acres
29	Thermalito Diversion Pool	R	DWR, SRA	4 miles in length
30	Thermalito Forebay North	R	SRA	300 acres
31	Thermalito Forebay South	R	SRA	300 acres

**TABLE 7.10-A
EXISTING AND PROPOSED
PARK AND RECREATION FACILITIES AND OTHER OPEN SPACE LANDS
IN THE OROVILLE PLANNING AREA**

Map ID ¹	Facility Name	Type ²	Owned and Operated by	Size
32	Wyandotte Park	N	FRRPD (leased from Oroville Elementary School District)	2.6 acres
	Future Facilities:			
10	River Bend Park	U	FRRPD	60 acres
11	River Bend Park addition	U	DFG	60 acres
23	Nelson Park addition	C(S)	FRRPD (leased from DWR) and DWR	54 acres
33	Grand Ave. Community Park (Thermalito)	C	City	20 acres
34	South of Nelson Ave., West of 12th Street, Neighborhood Park (Thermalito)	N	City	8 acres
35	River Bend Neighborhood Park (Thermalito)	N	City	8 acres
36	Garden Drive Vicinity Neighborhood Park (north of Power Canal)	N	City	8 acres
37	East of Fish Barrier Dam Vicinity Neighborhood Park	N	City	8 acres

**TABLE 7.10-A
EXISTING AND PROPOSED
PARK AND RECREATION FACILITIES AND OTHER OPEN SPACE LANDS
IN THE OROVILLE PLANNING AREA**

Map ID¹	Facility Name	Type²	Owned and Operated by	Size
38	Linda Loma Drive/Buehler Ave./Olive Highway Vicinity Neighborhood Park	N	City	8 acres
39	Riverview Drive Vicinity Neighborhood Park	N	City	8 acres
40	Olive-Oakdale Community Park	C	City	20 acres
41	Mount Ida/Miner's Ranch Road Vicinity Neighborhood Park	N	City	8 acres
42	Mount Ida-Oakdale Ave. Vicinity Neighborhood Park	N	City	8 acres
43	East-of-Wyman-Ravine/South-of-Mount-Ida-Road Neighborhood Park	N	City	8 acres
44	South of Monte Vista Avenue Vicinity Neighborhood Park	N	City	8 acres
45	South Side-Las Plumas Community Park	C	City	40 acres
46	Oroville Garden Ranch Road and Brookdale Drive Neighborhood Park	N	City	8 acres

TABLE 7.10-A
EXISTING AND PROPOSED
PARK AND RECREATION FACILITIES AND OTHER OPEN SPACE LANDS
IN THE OROVILLE PLANNING AREA

Map ID ¹	Facility Name	Type ²	Owned and Operated by	Size
47	Wyman Ravine Open Space, Northeast Site	OS	—	340 acres
48	Wyman Ravine Open Space, Southwest Site	OS	—	195 acres
49	Thermalito Diversion Pool/Sycamore Hill Area Open Space	OS	—	570 acres
50	Thermalito Power Canal/Thompson Flat Open Space	OS	—	215 acres
51	Deer Creek Open Space	OS	—	6 acres
Total Acreage of Existing (as of 1994) Neighborhood and Community Parks, and Special Facilities:				86.78 acres
Total Acreage of Proposed Neighborhood and Community Parks, and Special Facilities:				222 acres
Total Buildout Acreage of Neighborhood and Community Parks, and Special Facilities:				308.78 acres
Existing Neighborhood and Community Parks and Special Facilities, Acreage Per 1,000 Residents (86.78 Acres Per 32,000 Residents)				2.71 acres per 1,000 residents
Proposed Neighborhood and Community Parks and Special Facilities, Acreage Per 1,000 Residents (308.78 Acres Per 80,277)				3.8 acres per 1,000 residents

Sources: City of Oroville, Department of Parks and Trees; Feather River Recreation and Park District; State Department of Parks and Recreation.

Notes: NA = information not available

FRRPD = Feather River Recreation and Park District

DFG = California State Department of Fish and Game

DWR = California State Department of Water Resources

SRA = State Recreation Area, operated by the State Department of Parks and Recreation

There is no Map ID Number 6, either in this table, or on GP Figure 7.10-A, due to deletion of a site that was previously thought to be at a stage of impending acquisition, and subsequently rejected in favor of a proposed alternative.

¹ Keyed to GP Figure 7.10-A.

² N=Neighborhood Park, C=Community Park, R=Regional, S=Special Facility, L=Linear Park are defined in the text. U=Undefined, OS=Open Space

³ Availability of water and sewer service is not generally indicated here. Facilities range from no service to full service.

⁴ Although most privately owned park and recreation facilities are not considered here, the two golf courses are, because of their community open space value.

⁵ Although facilities outside of the Planning Area are generally not considered here, Lake Oroville and the Spillway Boat Ramp are included due to their immediate proximity.

School-related facilities. Playing fields and playground facilities associated with schools within the Planning Area comprise an important recreational resource. Two high schools (plus a continuation high school) and twelve junior high or elementary schools offer recreational facilities to the public. These facilities include ballfields, basketball, tennis, handball, and volleyball courts, areas for hard-surface play, and multi-purpose turf areas. (See also Section 7.20, Schools.) Acreages for school-related facilities are not available. Proposed new schools will provide additional recreational opportunities for Planning Area residents. Schools locations are shown on GP Figure 7.20-A.

Linear parks. Hiking, bicycling, and equestrian trails can be viewed as "linear parks." These trails are described further in Section 7.11. Because of their narrow character, the extent of linear parks is expressed in miles, rather than acres. Bicycle routes traverse linear parks, and are described in detail in Section 5.40.

Mini-parks. Mini-parks are small parks or green areas. Oroville's mini-parks and green areas include Wallace Park (.53 acres), Railroad Park (.49 acres), Soroptomist Park (.25 acres), and Heritage Park (the open space around the old County Courthouse, now the Superintendent of Schools office). Due to their size and the map scale, mini-parks are not shown on the General Plan Diagram.

PARK STANDARDS

Park provision standards involve two primary factors: how many neighborhood and community parks are needed and where. The ratio of local-serving facilities to the population does not take into account existing region-serving recreational facilities available in Oroville. Therefore, the actual availability of recreational opportunities for residents is higher than indicated.

Parks per 1,000 residents. A standard adopted by many California cities for the provision of neighborhood and community parks is a total of about 3 to 5 acres per 1,000 residents. The City Parks Commission has adopted a standard which requires a minimum of 5 acres per 1,000 residents. Standards published by the National Recreation and Parks Association (NRPA), 1983, call for 6.25 to 10.5 acres per 1,000 residents. With a Planning Area total of about 32,000 residents and 86.8 acres of existing neighborhood and community parks, the 1994 ratio is about 2.7 acres per 1,000 residents, slightly below the standard range. Although precise acreages are unavailable, if recreational facilities at schools are additionally considered, the ratio improves.

Upon buildout of the plan, the population of the Planning Area is assumed to reach 80,277. Neighborhood, community, and special parks proposed on the General Plan Diagram total 222 acres, bringing the total park acreage to 308.78. The ratio of park acreage to residents would then become 3.8 acres per 1,000 residents, which is within the standard range for California cities, and approaches the standard established by the Parks Commission. Adding the total school facility acreages, the 60 acres of River Bend Park, plus 60 acres of land to the south the overall amount would improve the ratio, and would equal or exceed the 5 acres per 1,000 residents standard. (Golf course acreage was not included in the calculations.)

Service area radii. Achieving park acreage standards based on a City average does not guarantee that the facilities are distributed evenly throughout the Planning Area. In addition to calculating the amount of necessary park acreage, the actual location of neighborhood and community parks (and school recreation facilities) is critical to determining whether facilities are meeting the needs of all user groups. Elementary school children, for example, desirably should have a park within three-eighths to one-half mile of their homes. Distances of greater than one-half mile have proven to be too far in many communities. Even parks within this service radius may not be used by children if some barrier, such as a major thoroughfare, exists. Other special user groups include the elderly and the disabled.

The park distribution pattern shown on the GP Figure 7.10-A reflects an attempt to provide facilities at regular intervals throughout the Planning Area, with more facilities in areas of denser concentrations of residents and, in particular, in areas with the highest concentrations of school age children, such as in the Foothills area and in the South Side-Las Plumas area. School playgrounds, ballfields, and play facilities are also available throughout the Planning Area for out-of-school-hours recreational activities. Because of the City's dispersed population, it will be especially difficult to locate parks (or school recreational facilities) within one-half mile of everyone, since this would be expected to far exceed the 3 to 5 acre per 1,000 residents standard.

Park users and park sizes. Neighborhood parks are designed primarily to meet the needs of elementary school age children living within one-half mile. The six existing parks range from 2 to 8 acres, and the Plan's proposed eleven parks average about 8 acres. (The National Recreation and Parks Association (NRPA) recommends 15+ acres per park, a standard that is rarely met by California cities.)

Community parks serve all ages and include landscaped areas, fields, courts, and large play areas. The two developed community-sized parks are 15 and 30 acres and also serve as neighborhood parks for nearby residents. The NRPA recommends 25+ acres. The three additional community parks indicated on the General Plan diagram would range from 20 acres to 40 acres, and the addition to Nelson Park would enlarge the facility to 84 acres.

Objectives: Parks, Recreation and Open Space

- 7.10a Strive to create a high quality, diversified public park system that provides adequate and varied recreational opportunities conveniently accessible to all present and future residents, and that enhances Oroville's unique attributes.
- 7.10b Cooperate with the Feather River Recreation and Park District, State Department of Parks and Recreation, local school districts, and private purveyors in establishing and maintaining park and recreation facilities within and adjacent to the Planning Area.
- 7.10c Increase new park use and intensify the presence of the "urban forest" by selecting highly visible locations for new parks in population service center areas.

The General Plan Diagram shows general locations for proposed park sites. Specific sites will be selected and specified subsequently. Site selection should proceed with park visibility as a high priority. The "urban forest", as used here, is the sum total of the Planning Area's trees, on both private and public lands. See also Objective 4h.

- 7.10d Where human presence will not negatively impact sensitive species, strive to locate neighborhood and community parks adjacent to or surrounding riparian corridors, to take advantage of the scenic value of the riparian corridor, to ensure its preservation, to strengthen the connection between riparian corridors and parkland throughout the Planning Area, and to increase the presence of nature in the Planning Area.

City parks crossed by meandering creeks and streams offer the unique opportunity for residents to experience part of a natural ecosystem in an urban setting. Riparian corridors also provide a focus for the City's trail system, and shady parks along the route offer resting points for hikers, bicyclists, and equestrians. See also objectives 6.11f, 6.11g, and 6.11h, and policies in Section 7.11, Trails.

- 7.10e Maximize visual and physical access to waterways and to open water, where such access will not conflict with preservation of habitat values.

The expanses of water that characterize significant sections of the Planning Area are valuable open space resources, providing both visual relief from the urban setting and

unique recreational opportunities that do not exist in most other Central Valley communities. The Planning Area's open water, water bodies, and waterways include Lake Oroville (not within the Planning Area, but a local resource), the Feather River, Thermalito Diversion Pool, Thermalito Power Canal, Thermalito Forebays, the Thermalito Afterbay, and various smaller streams, ponds, and sloughs.

Implementing Policies: Parks, Recreation and Open Space

7.10f In coordination with the Feather River Recreation and Park District, and the other effected and participating agencies; prepare and adopt a Parks, Recreation, Open Space, and Trails Master Plan, including, but not limited to, the following elements:

- Acreage and service area standards for all park classifications, open space sites, and schools sites that offer recreational opportunities;
- A trails element with identification of a trails system and publication of a trails system map, including routes for walking, jogging, hiking, bicycling, and equestrian use;
- An assessment of existing and future parks, recreation, and open space needs, including a review of opportunities to incorporate FRRPD facilities into the City system;
- Identification of and planning for the needs of special user groups, such as the disabled and elderly in park and recreation facility development;
- Development of an action plan to provide for sites and facilities to meet the City's needs, including a priority program of acquisition and improvement of park lands, analysis of revenues to be received, a funding strategy and a schedule for acquisition, development, and maintenance of facilities;
- Development of a procedure to review park standards periodically to determine whether needs are being satisfied and whether long-term costs will be affordable, and how to proceed if they are not.

Policies contained in this section of the General Plan, together with generally proposed park locations identified on the General Plan Diagram, are to be the basis for coordination and enhancement of the park system. The site-specific planning (actual site selection, financing, acquisition, and park design) that will be needed for full implementation of the system will be most effectively addressed in a detailed Parks, Recreation, Open Space, and Trails Master Plan. Additional policies on trails are found in Section 7.11, and in the

discussion of the bicycle system in Section 5.40. Policy 8.50b specifies compliance with the transmission line setback standards established by the State Department of Education, School Facilities Planning Division, when locating parks.

- 7.10g Coordinate park and trails development and operation with the Feather River Recreation and Park District (FRRPD) and other participating entities and agencies.

This policy is consistent with the Feather River Recreation and Park District's 1984 to 1994 Master Plan; Goal II-D states, "Promote maximum cooperation among governmental and private agencies in order to provide services and facilities through joint agreements in planning, reciprocating, and consolidating of resources that would be beneficial to all segments of the community." While the General Plan specifies the desired sizes and general locations of proposed City or Planning Area parks, it is possible that the FRRPD would actually develop and/or operate parks in those locations.

Proposed parks shown on the General Plan Diagram reflect portions of the FRRPD's Master Plan (1984-1994). These include the Feather River Parkway, River Bend, Nelson Park addition, and neighborhood or community park sites in the Foothills, Kelly Ridge, Las Plumas, and Thermalito areas. All of these are shown on the Oroville General Plan Diagram as Parks/Open Space.

- 7.10h Strive to provide a neighborhood or community park area (or special facilities that function as a neighborhood or community park) consistent with the City's standard.

If all parks designated on the General Plan Diagram are acquired, there will be 3.8 acres of neighborhood parks, community parks, and special facilities per 1,000 residents at buildout vs. 2.7 acres per 1,000 City residents existing in 1994 (City population only.) School sites are not included in the calculation of neighborhood parks, community parks, and special facilities, nor are golf courses or undefined facilities, such as the proposed River Bend Park.

- 7.10i Work with the Feather River Recreation and Park District to continue joint planning for future development of the Feather River Parkway and bicycle path.

- 7.10j Support and provide guidance to the State of California, Department of Parks and Recreation, in their efforts to develop the Thermalito Afterbay for active water-related recreational activities.

The Lake Oroville District of the State Department of Parks and Recreation (DPR) has identified the Thermalito Afterbay as having tremendous undeveloped day-use potential. The Afterbay's daily tidal flux of five to six feet is relatively low, compared to Lake

Oroville's seasonal fluctuation, which can be up to a 200 foot drop, making further development of Lake-related facilities problematic. The smaller tidal flux of the Afterbay is thus an asset, and the DPR notes that the Afterbay has development potential for swim beaches, marinas, picnic areas, or camping. Lands around the Afterbay are shown on the General Plan Diagram as State Water Project Lands.

- 7.10k Work with the FRRPD to enhance the Mitchell and Nelson parks to ensure that they achieve true "community park" status by providing adequate space for a range of activities aimed at a variety of user groups, without sacrificing their value as popular sports facilities.

Expansion, renovation, and provision of facilities (additional picnic facilities, play equipment, and multi-purpose fields) in addition to the existing well-used sports facilities would strengthen these parks' appeal for all age groups.

- 7.10l Improve access to and identification of existing parks that have limited or obscured street frontage.

Limited street frontage may contribute to a park user's sense of privacy, but makes the facility harder to find, and results in underuse. Objective 7.10c specifies the selection of highly visible locations for new parks. Small City signs with park and directional arrows would also aid in orienting visitors.

- 7.10m Encourage preservation of natural areas outside the Planning Area.

- 7.10n Enhance the wildlife value of the Planning Area's "urban forest" by landscaping park and recreation lands with native vegetation, where possible, including on-site preservation of existing trees and shrubs, where they offer significant wildlife value and the action is consistent with the provisions of this General Plan.

See also Objective 6.11i.

- 7.10o Pursue cooperative efforts with local school districts through joint use agreements for park and recreational facilities creation and operations.

The Feather River Recreation and Park District maintains joint use agreements for Harrison Stadium and other District-maintained sports fields.

- 7.10p Require parkland dedication or the payment of assigned fees in association with proposed new development consistent with the City's standard until a Parks, Recreation, Open Space, and Trails Master Plan is adopted by the City Council.

- 7.10q Calculate park fees to enable the purchase of acreage and the provision of off-site improvements consistent with the City's standard until the Parks, Recreation, Open Space and Trails Master Plan is adopted by the City Council.
- 7.10r Minimize substitution of private recreation facilities for developer fee payment or park dedication to ensure that a public park system will be permanently available to the entire community.
- 7.10s Pursue park and open space grant opportunities and cooperative agreements with local, regional, and State agencies for expansion of the Planning Area's park and open space system.

Grants are available through the Department of Water Resources' Urban Stream Restoration Program for projects that restore or enhance the aesthetic, recreational, fish, and wildlife values of waterways. Such a grant could be useful in enhancing parks along the Planning Area's riparian corridors.

- 7.10t Continue to collect user fees for improving and operating park and recreation facilities.

User fees are one method of guaranteeing contributions towards the park system from individuals who use the Planning Area's recreational facilities, although they live elsewhere.

7.11 TRAILS

Oroville's scenic pathways enhance the recreational enjoyment, health, and safety of the community. With the increased awareness of the health benefits of walking and jogging, the trend towards promotion of nonmotorized transportation, the growing recreational use of bicycles, and the continued popularity of horseback riding, a greater portion of the community than ever before will enjoy the Planning Area's existing and future trails. Trails can also serve as emergency evacuation routes in the event of a catastrophe that may make some trafficways impassable.

Because of a special role as a potentially viable component of the circulation system, bikeways are described in greatest detail in the Circulation Element. Many of the trails shown on GP Figure 5.40-A are multi-use trails, suitable for various types of recreation, including bicycling, hiking, walking, jogging, and equestrian use. Others are intended primarily for bicycle use (Class I bicycle paths). Class II bikeways (bicycle lanes) are also shown on GP Figure 5.40-A and provide important connections between recreational areas, but are not discussed further here, since they are restricted to public roadways, and do not involve trails.

The California Hiking and Equestrian Trail (comprised of segments known as the Dan Beebe Trail and the Bridle Trail), owned and maintained by the State Department of Parks and Recreation (DPR), is the longest recognized trail within the Planning Area, stretching from the Thermalito Diversion Dam about seven miles to the Kelly Ridge Visitor's Center, and then to Bidwell Canyon and Saddle Dam in the east. As implied in its name, the California Hiking and Equestrian Trail is geared for use by foot traffic and horses, rather than bicycles.

The Burma Road Trail runs along the north side of the Thermalito Diversion Pool, from the railroad-trestle-crossing to the spillway, also on land controlled by the DPR. Until recently this trail was used by joggers and bikers. Currently, the trail is gated and closed because a bridge along the trail is in need of repair. Portions of the Burma Road Trail are proposed for improvement and inclusion in the bikeways system.

The General Plan provides for development of the River Bend site as River Bend Park, which will function as a trailhead and staging area for Feather River Parkway users. The existing (1994) 3.5-mile Feather River Parkway parallels the south side of the River through downtown Oroville, and is used as a bikeway. The Plan shows expansion of the Feather River Parkway to encompass both banks of the Feather River, spanning the River's entire length through the Planning Area. The trail along the northern/western bank of the River is primarily a paved bicycle path, with the exception of a segment north of Table Mountain Boulevard. The trail along the southern/eastern bank of the River would feature a paved bicycle path (Class I) adjacent to the River along most of its length, paralleled by an unpaved multi-use recreational trail just to the south/east.

From the Feather River Parkway a bicycle lane (Class II) will continue to the west and provide connections to Nelson Community Park and a neighborhood park near Garden Drive. From this location, the Class II trail will then continue north towards Chico.

A proposed unpaved multi-use recreational trail also begins at Garden Drive and loops around the North and South Thermalito Forebays, the Thermalito Afterbay and through the Oroville Wildlife Refuge. The trail will eventually reconnect with the Feather River Parkway in Downtown Oroville allowing users to travel continuously from Downtown Oroville through the Thermalito waterways and the Oroville Wildlife Refuge.

There are also existing, less formally recognized trails and paths used frequently by Planning Area residents; these include dozens of unimproved dirt trails within the Oroville Wildlife Area.

Objectives: Trails

- 7.11a Create and maintain a system of multi-use and specialized use trails serving both recreational and emergency access needs. The system is to accommodate walking, hiking, jogging, equestrian and bicycle use.

- 7.11b Support the multi-use concept of drainageways, by coordinating trails planning with preservation of riparian corridors as open space, for the flood control value of natural riparian corridors, and for habitat preservation.

See also Objective 6.11h and Objective 8.20c.

Implementing Policies: Trails

- 7.11c As a part of the Parks, Recreation, Open Space, and Trails Master Plan and in coordination with the Feather River Recreation and Park District, prepare a Trails Element depicting regional and community multi-use and specialized trails. Include provisions for the following in the Trails Element:

- Identification of existing and future trails throughout the Planning Area, connections to trails outside of the Planning Area, and, ultimately, trail connections to other communities, including Chico;
- Specification of which trails are to be designated for which types of uses, recognizing that separate trails may be needed for specialized uses;
- Identification of off-road bicycle paths in addition to on-street bike lanes to ensure that bicyclists have the option of riding somewhere separate from automobile traffic, consistent with the City's General Bikeway Plan;
- Analysis of how trail alignments relate to access to existing transit lines, and a strategy for provision of transit access points for weary hikers;
- Design trails in proximity to riparian corridors, where such location will not negatively impact biotic resources;
- Location of trail rights-of-way with concern for safety, consideration for nearby residents, convenience, and enabling users to see the Oroville area in ways not available to road-bound travelers;
- Connections between important cultural and natural features;
- Landscape and design standards that include an emphasis on maintenance of natural vegetation and topography along the railway; and
- A program for construction, maintenance, and rehabilitation of trails.

FRRPD has expressed an interest in multijurisdictional coordination and completion of a trails system within the Planning Area. Improvements could range from maintenance of existing dirt or paved pathways to enhancement or construction of Feather River crossings for walkers, hikers, joggers, bicyclists, and equestrians.

GP Figure 5.40-A shows the generalized alignments of existing and proposed trails, and are to be the basis for formulation of the trails system, which should be closely coordinated with development of the City's General Bikeway Plan. Site-specific planning (alignment selection, financing, acquisition, and trail design) is best done in the trails element of the detailed Parks, Recreation, Open Space, and Trails Master Plan, specified in Policy 7.10f. Additional trails may be added to GP Figure 5.40-A and may be specified in the Parks, Recreation, Open Space, and Trails Master Plan without amendment of the General Plan. As noted in the italicized text below Policy 7.10p, parkland dedication associated with development approvals may include dedication of land necessary for completion of the trails system. Policy 6.11z specifies coordination of trail planning with habitat and species protection.

- 7.11d Seek grant funding for the design and implementation of a trails system known as the Feather River Parkway. This trail system shall run along the Feather River, from the Lake Oroville Dam to the Oroville Wildlife Area, using existing trail segments, and creating new segments, where necessary.

Part of this system currently exists including the Bridle Trail, the Dan Beebe Trail, and the 3.5 mile segment of the Feather River Parkway. The levees along the Feather River provide additional opportunity for trail development. Previous discussions have centered on where the trail should cross the Feather River; the FRRPD has considered extension of a bicycle path over the Highway 162 bridge, an earlier study examined the possibility of putting a path under the Washington Ave. bridge, and participants in the General Plan revision expressed interest in construction of a pedestrian/bike bridge spanning the Feather River apart from an automobile crossing.

- 7.11e Establish agreements with private entities and public agencies for development and maintenance of trails through their property; obtain trail easements from property owners where feasible; consider the potential for amenities such as benches, water fountains and signage for identification of existing trailside resources. Seek dedication of existing trails and confirmation of prescriptive rights for trail use that may exist.

Development of a formal trails system will require easements across private property and passage through utility corridor rights-of-way.

- 7.11f Seek grants for trail development and maintenance.

7.11g Consider conversion of abandoned rail corridors into recreational trails.

The non-profit Rails to Trails Conservancy, based in Washington D.C., can provide information on all aspects of restoration of abandoned rail corridors into developed trails. Although the primary rail corridors through the Planning Area are actively used by railway companies (1994), corridors that may become abandoned during buildout of the Plan offer future opportunities for trail development. Landscaped trails designed in abandoned railway corridors through Oroville's industrial area may offer workers and area residents expanded recreational opportunities in areas previously neglected or not considered for trails and landscaping.

7.20 SCHOOLS

Local School Districts. Four school districts serve Planning Area children and teenagers, as shown in GP Figure 7.20-A and Table 7.20-A, and Butte County operates three schools within the Planning Area for students with special needs. Elementary school students (K-8) within the Planning Area are served by eleven schools, as shown in Table 7.20-A. Bird, Oakdale Heights, Ophir, Stanford, and Wyandotte are all K-6 schools, Eastside is K-3, Poplar is K-2, Sierra provides for grades 3-5, Nelson for grades 1-8, Helen Wilcox is K-4, and Central provides for grades 7-8.

High Schools. High school students (grades 9-12) within the Planning Area are served by three facilities; Oroville High School, Las Plumas High School and Prospect Continuation High School. Oroville High School accepts students from the following elementary and junior high schools: Central, Bird, Stanford, Wyandotte, Eastside, Nelson, Poplar and Sierra. Las Plumas High School serves students from Central, Wyandotte, Oakdale Heights, Ophir, Helen Wilcox in addition to students from other schools outside of the Planning Area. Continuation students attend Prospect Continuation High School.

As shown in GP Figure 7.20-A, the Thermalito Union School District covers most of the northwest portion of the Planning Area, including the Thermalito and North planning sectors. The Oroville Elementary School District covers the central and northeastern portions of the Planning Area, including the Northeast, Kelly Ridge, Foothills, and Old City planning sectors, and part of the South Side-Las Plumas planning sector. The Palermo Union School District covers a small part of the south central and southeast portion of the Planning Area, which includes parts of the South Side-Las Plumas and Foothills planning sectors. The Oroville Union High School District overlays these districts, and covers most of the Planning Area, excluding areas which are both west of Wilbur Road and south of Nelson Avenue.

TABLE 7.20-A
PLANNING AREA SCHOOLS,¹ GRADE LEVELS, AND ENROLLMENT BY SCHOOL DISTRICT

Map ID	Facilities	Grade Levels	Current Enrollment ²	Capacity ³	Projected Enrollment ³
A B C H I O P	Oroville Elementary School District		3,555 ^a	2852	3,601 ^b
	Bird	K-6			
	Central	7-8			
	Eastside	K-3			
	Oakdale Heights	K-6			
	Ophir	K-6			
	Stanford	K-6			
	Wyandotte	K-6			
J E L	Oroville Union High School District		2,229 ^c	2104	2,549 ^d
	Oroville	9-12			
	Las Plumas	9-12			
D	Prospect Continuation School	10-12			
	Palermo Union School District ⁴		660 ^e	672	777 ^f
	Helen Wilcox	K-4			
G K M	Thermalito Union School District		1,462 ^g	1477	1,514 ^h
	Nelson	1-8			
	Poplar	K-2			
	Sierra	3-5			
	Totals		7,906	7105	8,441

¹County-run special education schools are not listed here, but are shown on GP Figure 7.20-A. Proposed schools are listed in Table 7.20-B.

²"Current" date varies by district, as noted. Enrollment includes all schools within each district, except those outside of the Planning Area.

³Enrollment projections vary by district, as noted.

⁴Palermo Union School District also contains the one-room Honcut School (K-2), and Palermo School (K, 5-8), which falls outside of the Planning Area. 1993-1994 enrollment data shows that Honcut School has 21 students, Palermo School has 585 students.

⁵Does not include additional capacity offered by year-round conversion.

^a 1993-94 school year.

^b 1994-95 school year, based on district projections.

^c 1993-94 school year.

^d 1996-97 school year, based on 1994 projections.

^e 1993-94 school year. This total is just for the Helen Wilcox School, since it is the only school within the Palermo Union School District that is within the Planning Area. Total district enrollment is 1,269.

^f 1995-96 school year. Total district enrollment is projected to be 1,480.

^g 1993-94 school year.

^h 1995-96, based on 2% growth per year.

Map ID letters are keyed to GP Figure 7.20-A.

Capacity may be increased slightly by conversion to year-round schools. Bird Street has been year-round since 1989, and Ophir became year-round in 1992.

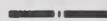
Sources: Oroville Elementary School District, Oroville Union High School District, Palermo Union School District, Thermalito Union Elementary School District, Government Financial Strategies, Inc.

OROVILLE PLANNING AREA

Schools and School Districts

GP Figure 7.20-A

A	Bird K-6	N	Sierra del Oro (special)
B	Central 7-8	O	Stanford K-6
C	Eastside K-3	P	Wyandotte K-6
D	Helen Wilcox K-4	Q	Proposed K-6
E	Las Plumas High 9-12	R	Proposed 6-8
F	Mesa Vista (special)	S	Proposed K-8
G	Nelson 1-8	T	Proposed K-6
H	Oakdale Heights K-6	U	Proposed K-6
I	Ophir K-6	V	Proposed K-6
J	Oroville High 9-12	W	Proposed K-8
K	Poplar K-2	X	Proposed K-8
L	Prospect Continuation	Y	Proposed K-6
M	Sierra 3-5		

-  Schools¹
-  School District Boundary
-  City Limits

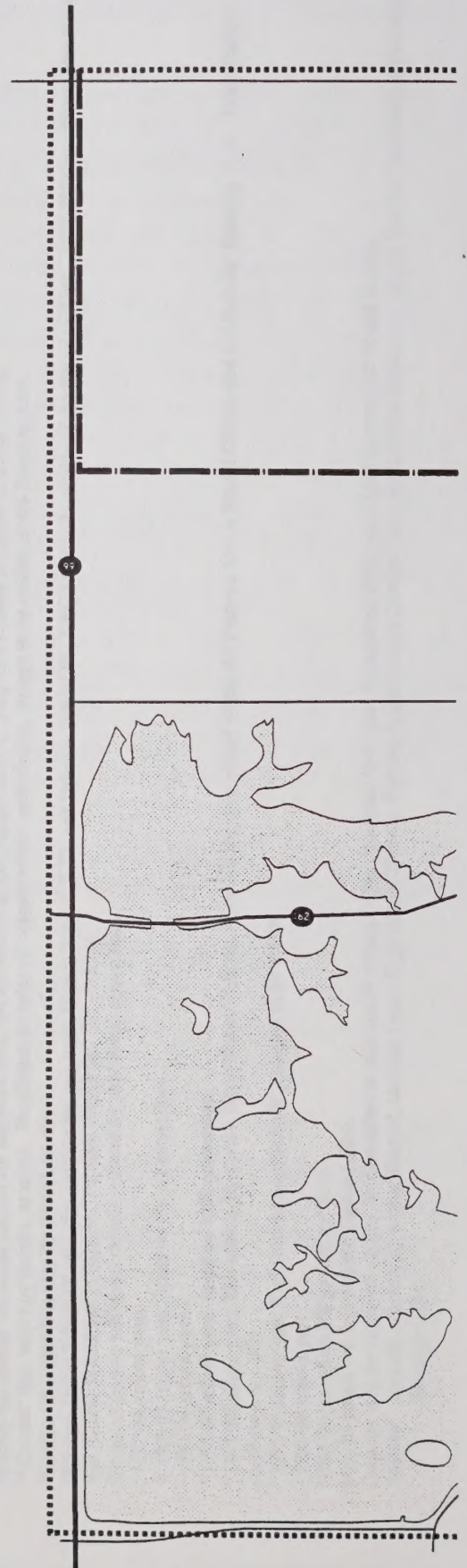
Notes: Oroville Union High School District covers entire Planning Area, excluding Biggs Elementary School District.
Proposed school locations shown on this figure are approximate.

¹Map ID letters are keyed to Tables 7.20-A and 7.20-B

Sources: School Districts (1991-92);
Government Financial Strategies (1992).

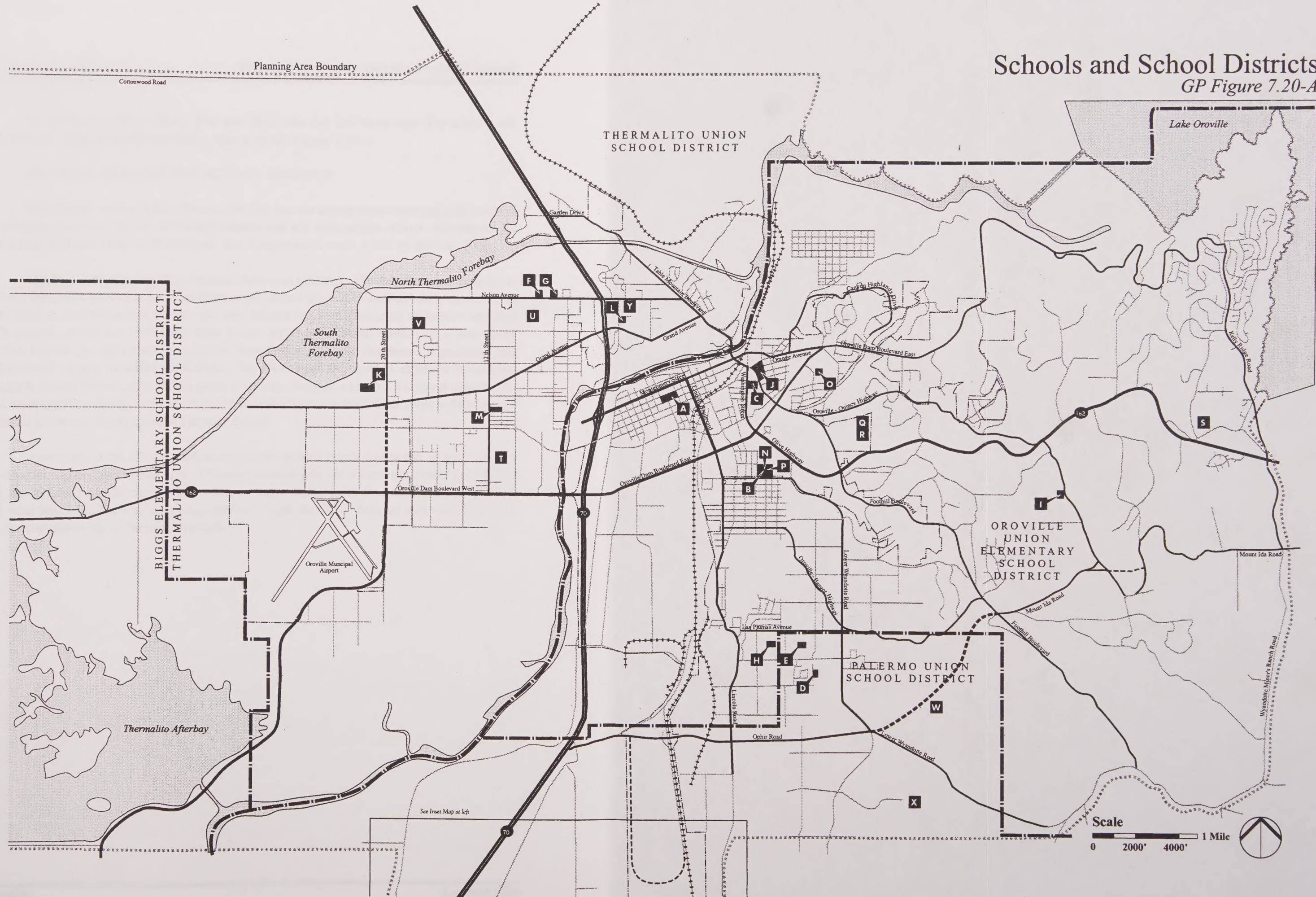


Southern extension of Planning Area



Schools and School Districts

GP Figure 7.20-A



As shown in Table 7.20-B, five new K-6, one 6-8 and three new K-8 schools are proposed. Locations of the proposed schools are shown on GP Figure 7.20-A.

OROVILLE ELEMENTARY SCHOOL DISTRICT

Oroville Elementary School District (OESD) has the largest enrollment and also contains the greatest number of schools with six elementary schools and one intermediate school. Enrollment for the 1993-94 school year was about 3,555 students, and is expected to reach 4,200 by the year 2000.

OESD is fully utilizing all permanent classroom facilities. Given the present capacity at existing schools, the OESD has determined that either a new school site will be needed within the next four years; Ophir, Central, and Wyandotte schools (the only schools left with substantial classroom capacity) will need to expand, and/or the OESD will have to use space at additional schools on a year-round schedule. The District has authorization from the State Office of Local Assistance to purchase one additional K-6 school site and one additional K-8 site. The District has also recently expanded the existing office at Stanford Avenue School; added office space at Oakdale Heights; added six additional classrooms, an additional kindergarten building, and additional kitchen/office space at Wyandotte Avenue School; and added additional office and library space at Eastside School.

According to the OESD, student enrollment growth trends are based, in part, on two unstable community factors: the immigration of Hmong students into the community during the last few years which has increased enrollments and may either increase or decline in the future; and the influx of Hmong and other young families with school-age children, which the OESD believes may reverse if more jobs within the community do not become available.

**TABLE 7.20-B
PROPOSED SCHOOLS, 1995 GENERAL PLAN**

Map ID	Facilities and Grade Levels
	Oroville Elementary School District
Q	Proposed K-6
R	Proposed 6-8
S	Proposed K-8
	Oroville Union High School District
	No additional facilities are proposed at this time
	Palermo Union School District
W	Proposed K-8
X	Proposed K-8
	Thermalito Union School District
Y	Proposed K-6
T	Proposed K-6
U	Proposed K-6
V	Proposed K-6

Notes: Map ID letters are keyed to GP Figure 7.20-A. The Plan assumes continuation of existing facilities, as listed in Table 7.20-A and as shown on GP Figure 7.20-A, and on the General Plan Diagram.

Source: Blayney Dyett Greenberg.

Modified: Willdan Associates (1994)

PALERMO UNION SCHOOL DISTRICT

Palermo Union School District (PUSD) serves students from a 75-mile radius, and is comprised of three schools, Palermo School (K, 5-8), Helen Wilcox School (K-4), and Honcut School (K-2). Only Helen Wilcox, which serves 660 of the District's 1,269 students, is within the Planning Area. Currently the District is experiencing 0% to 1% growth.

Enrollment projections show a need for new classrooms and additional facilities at Helen Wilcox over the next few years. The multipurpose room is able to hold only half of the student body at a time, and lunch is served in four relays, due to a lack of space.

THERMALITO UNION SCHOOL DISTRICT

The Thermalito Union School District (TUSD) serves 1,462 students, with an anticipated growth to 1,514 by the 1995-1996 school year (2 percent average annual growth rate). TUSD will be updating and revising its enrollment projections as part of a master plan revision process. If future growth rates increase, TUSD may add portable classrooms, begin year-round education or initiate double sessions to accommodate the growth.

OROVILLE UNION HIGH SCHOOL DISTRICT

Oroville Union High School District (OUHSD) receives students from seven feeder elementary school districts (comprised of 19 schools), of which four districts (and eight schools) do not overlap with the Planning Area. The three that are partially within the Planning Area are OESD, Thermalito, and Palermo school districts. Bangor, Feather Falls, Golden Feather, and Pioneer school districts are located outside of the Planning Area.

The three schools within the Planning Area that belong to QUHSD are Oroville and Las Plumas high schools and Prospect Continuation School (PCS). As of the 1993-94 school year, the OUHSD served 2,229 students (including PCS), and is expected to have 2,549 students by the 1996-97 school year. While long-range goals are still to be determined, the OUHSD plans to add 60,000 square feet to District facilities, mostly at Las Plumas High School.

BIGGS UNIFIED SCHOOL DISTRICT

In addition to the three other school districts mentioned above, the Biggs Unified School District also serves the southwestern corner of the Planning Area. As shown on GP Figure 7.20-A, the area served by this school district consists primarily of the Thermalito Afterbay, State Water Project Lands, and lands designated as Resource Management on the General Plan Diagram. There are no schools currently located within this section of the Planning Area. The remaining portion of the school district is located outside of the Planning Area.

The Biggs Unified School District (BUSD) contains three school sites, with four different schools. The combined enrollments from Biggs Elementary School (K-6), Richvale Elementary School (grades 1-6), and Biggs Junior/Senior High Schools (7-12) bring the District total to 945 students (1993-94). The BUSD installed 8 portable classrooms between 1990 and 1993. However, limited student growth has occurred within the last two years and no new portables are anticipated at this time.

Any growth which does occur is expected to be primarily within the City of Biggs. None of the BUSD schools are within the Planning Area, however the District boundaries extend to Thermalito. Therefore, BUSD expects that portions of proposed development projects west of the Oroville Municipal Airport would fall under BUSD jurisdiction.

SCHOOL PLAY AREAS

School play areas are available for additional recreational opportunities within the Planning Area. These areas encompass both hard surface play areas (asphalt or concrete) with or without play equipment or demarcated activity lines, and grassy surfaces, including play fields.

Generally, the school districts have no record of the available play area acreages, and estimates are not available for OESD and OUHSD. Helen Wilcox, within the PUSD, is estimated to have 12 acres of play area. The three schools within TUSD are estimated to have between 15 and 20 acres of play area.

Objectives: Schools

7.20a Support the school districts' efforts to:

- provide for new public schools that will each serve as a neighborhood focus;
- maintain a quality learning environment for children in the Planning Area;
- secure funding for education from State and local sources.

7.20b Balance the need for local funding of school facilities with consideration of the impact of developer fees on housing cost.

Implementing Policies: Schools

7.20c Encourage the local school districts to establish a school impact mitigation program that is coordinated with the City and designed so that funding requests from Oroville Planning Area school districts receive highest priority under the State Lease-Purchase Program.

The highest State funding priority goes to projects where the school district has "substantial enrollment in multitrack year-round schools" and where the funding request is for "50 percent of the cost of a project that would be constructed to operate on multitrack year-round basis." Such a request would be based on a local funding share of 50 percent of project cost.

7.20d Encourage area school districts to operate multitrack year-round schools in order to use school facilities most efficiently and to meet requirements for highest funding priority under the State Lease-Purchase Program.

See comments following Policy 7.20c.

- 7.20e Continue to forward all development proposals, rezoning requests, and/or General Plan amendments to the appropriate school district for review and response. When such information is available, notify the appropriate school district of proposed development on Federal property not under the City's jurisdiction.

Allowing the school districts to participate in monitoring projects that will affect student generation will promote coordination between the City and the districts and allow all agencies to improve their planning.

- 7.20f In consultation with the school districts, continue to monitor student enrollment projections and projected school capacities for use in determining whether mitigation measures are appropriate.

Table 7.20-A includes enrollment projections as of 1993-94. Over time, projections should be adjusted based on changing demographic trends.

- 7.20g Work with the school districts to ensure that all school sites meet State Department of Education site review requirements.

The General Plan Diagram shows approximate locations of proposed schools in circles scaled to approximate acreages. Precise locations and configurations will be determined in conjunction with school districts at the time of tentative subdivision map design.

- 7.20h Physically and functionally integrate schools into their surrounding neighborhoods. Elementary and intermediate school locations should be:

- centrally located within residential neighborhoods;
- central to the anticipated attendance area to minimize walking distances;
- located to minimize the number of students having to cross major natural or artificial barriers to reach the school; and
- located with direct access to an existing or planned collector or minor arterial street, with additional access to a second road.

- 7.20i Ensure that access to all utilities and services, including sewer, water, gas, electricity, and drainage, are provided to school sites at the time new schools are to commence operations.

- 7.20j Require that all subdivision and parcel maps address the need for dedication and reservation of school sites consistent with the General Plan.

7.20k Use as general guidelines the following acreages for planned schools:

Approximate School Site Sizes	
Elementary Schools	10 acres
Middle Schools	20 acres
High Schools	40 acres
Continuation High Schools	8 acres

These sizes are approximate, and a different net acreage may be required if planned student enrollment is smaller or larger than normal.

7.20l Support and cooperate with local school districts in their efforts that extend beyond classroom education, including making open space and recreation facilities available for community use.

Policy 7.10o specifies coordination between the City and local school districts through joint use agreements for park and recreational facilities.

7.20m Allow private schools in areas designated for land use classifications that allow public and semi-public uses. The general locational criteria for schools in policy 7.20h should be applied to private as well as public schools.

7.30 WATER SUPPLY, WASTEWATER COLLECTION, AND TREATMENT

Five different agencies provide water and/or sewage collection service in the Planning Area, and a sixth is responsible for sewage treatment as shown in Table 7.30-A. Consolidation of these agencies has been a longstanding policy of LAFCO, but studies have not been pursued because of the perceived political improbability of consolidation in the near future and the County's strained financial resources. Special district boundaries are shown on GP Figure 1.90-A.

Water supply is described first, with discussion of wastewater collection and treatment following. Additional policies on treatment of contaminated water are found in Section 6.12 (Water Quality) of the Open Space and Conservation Element.

**TABLE 7.30-A
WATER AND WASTEWATER SERVICES PROVIDERS**

Agency	Area Served	Sewage Collection	Sewage Treatment	Domestic Water	Hydroelectric Power
Thermalito Irrigation District (TID)	Thermalito Parts of Oroville	✓		✓	✓
Lake Oroville Area Public Utility District (LOAPUD)	South Oroville- Kelly Ridge	✓			
Oroville-Wyandotte Irrigation District (OWID)	East and South of City of Oroville			✓	✓
City of Oroville	City of Oroville	✓			
California Water Service Company (CWS)	City of Oroville			✓	
Sewerage Commission Oroville Region (SCOR)	Greater Oroville		✓		

Sources: TID, LOAPUD, OWID, CWS, City of Oroville.

7.31 WATER SUPPLY

Water in the Planning Area is provided by three agencies:

The California Water Service Company (CWS). CWS supplies water to much of Oroville south of the Feather River and to South Oroville. Almost all of CWS's supply comes from the west branch of the Feather River.

Thermalito Irrigation District (TID). TID supplies domestic water to Thermalito and parts of incorporated Oroville. The District's primary water source is the surface impoundment at Concow Dam, north of the Planning Area. Six wells tap one of the largest aquifers in California providing an additional source to augment surface water supplies during the summer months. Water from five of the wells requires no treatment. Low levels of bacteriological contamination have been discovered at the sixth well, and chlorination was undertaken in 1991 to correct the problem.

The District has 10,000 acres of agricultural land and open space within its current boundaries, and another 19,000 acres in the ultimate sphere of influence. An additional 9,000 acres have recently been annexed to the District. These lands are dry farmed as of 1994, and have a lower priority than domestic consumers. Owners of land to the north of Campbell Hills have indicated long-range plans to cultivate rice if water can be made available. Service is likely to be contingent upon availability of delivery facilities.

There do not appear to be any major constraints to water supply in the District. The treatment plant has adequate built-in capacity for expansion. New wells can also be developed if needed in the future.

Oroville-Wyandotte Irrigation District (OWID). OWID provides domestic and irrigation water to areas north, south, and east of Oroville. The District gets its supply from the South Fork of the Feather River and currently exercises less than half of its water rights. It presently serves about 5,840 connections, and does not distinguish between domestic and agricultural water use.

The chief constraint to water supply in the District is the 12 million gallons per day (MGD) treatment capacity at the Miner's Ranch Reservoir plant. The plant has a 1994 excess treatment capacity of 1.46 MGD, which, with a minimum of conservation, would allow for about 2,000 more connections. It appears likely that development at buildout of the General Plan would require more than 2,000 connections. Enhancement of the treatment capacity would call for substantial capital expenditure (approximately \$5 million (1991) to double capacity to 24 MGD).

Other water-related issues. Policies concerning agricultural use of water are found in Section 6.21. Water quality policies are in Section 6.12. Policies on wastewater collection and treatment are in Section 7.32.

Objectives: Water Supply

- 7.31a Continue to encourage the water purveyors of the region to ensure that adequate water supply is available for the projected population and to developed properties throughout the Planning Area.
- 7.31b Coordinate the land planning process with the water purveyors' planning process to ensure that developments are not approved that can not be properly served with water at the time of completion.
- 7.31c Coordinate with special districts providing water service to adjust service area boundaries where beneficial.
- 7.31d Support water conservation measures.

Policies 7.31e through 7.31h are all designed to implement water conservation measures.

Implementing Policies: Water Supply

- 7.31e Work with the water districts and water company to implement water conservation measures, as necessary.

Despite the recent Statewide drought, the Oroville area's relatively low population and low intensity of land uses relative to existing water resources has prevented water conservation from becoming a major concern. This may, however, change in the future.

- 7.31f Coordinate with water districts to educate the public and encourage participation in voluntary water conservation measures, when necessary.

The availability of information and a sense of participation in a larger cooperative effort can lead to significant changes in individual behavior.

- 7.31g Explore the feasibility of using reclaimed wastewater for irrigation of public landscaping and for agriculture.

Although water availability is not presently a problem, availability of affordable water for farmers has become an issue in recent years. Some orchard owners (1994) are paying for treated water to irrigate their groves. Wastewater reclamation plants, while initially costly, could offer a long-term alternative supply of high quality irrigation water for landscaped areas and for agriculture. Use of reclaimed wastewater for irrigation would also help maintain aquifer levels by providing groundwater recharge through percolation, and through the resultant avoidance of the use of well-water, now used to irrigate golf courses in the Planning Area. The County Draft Energy, Natural Resources, and Recreation Element (November 1989) encourages and supports wastewater reclamation programs.

- 7.31h Encourage the use of drought-resistant landscaping and the use of reclaimed wastewater for agriculture and landscape irrigation supply water.

See also Policy 8.20k.

7.32 WASTEWATER COLLECTION AND TREATMENT

Development in many parts of the Planning Area, especially in the south and the east, is constrained by the capacity of existing infrastructure and by topography. In the absence of sewers, Butte County limits density of new residential development on soils that percolate well to one unit per five acres. Policies in Section 6.12 relate to treatment of contaminated water and preservation of water quality.

WASTEWATER COLLECTION

There are three wastewater collection agencies in the Planning Area including the City of Oroville, the Thermalito Irrigation District, and the Lake Oroville Area Public Utility District.

The City of Oroville. The City provides collection service to incorporated areas south of the Feather River. Some collector lines of the City's system are too small to handle present flows, especially during wet periods. The City is presently preparing a Master Sanitary Sewer Study (1995) to evaluate its capability to extend service and to develop service design criteria. The sewer study is being prepared in conjunction with this General Plan, to most accurately determine future demand.

Thermalito Irrigation District (TID). TID serves Thermalito and parts of incorporated Oroville, as shown on GP Figure 1.90-A. The District is empowered and willing to extend sewer service to any area within its Sphere of Influence, which includes all of the Planning Area west of Highway 70. TID feels that because of larger-sized collector systems, it may be in a better position than the City to extend sewers to developments west of Highway 70 that may want to annex to the City.

Because of water quality problems associated with the clay soil in Thermalito, TID requires all development within 250 feet of a sewer line to connect to it. Septic tanks are allowed only on the condition that future connection to sewers may be required.

Lake Oroville Area Public Utility District (LOAPUD). LOAPUD serves areas to the south and east of Oroville, as shown on GP Figure 1.90-A. LOAPUD currently (1994) serves 4,348 housing units and 307 commercial sites. Its Sphere of Influence extends to Lake Oroville in the east, to Mt. Ida Road in the southeast, and to south of Ophir Road. Many proposed developments in the East Oroville area are looking to LOAPUD for sewer connections. LOAPUD does not place any restrictions, separate from the County's, on septic tanks.

While the District has excess capacity during dry weather, wet weather flows far exceed its agreement with SCOR. LOAPUD believes that capacity constraints can be negotiated, and that the actual constraints are geographic and financial, and involve potential customers' ability to pay for service extensions. With adequate financing, LOAPUD would be willing to extend service as far south as Palermo, north and west into Oroville, and east to Lake Wyandotte.

WASTEWATER TREATMENT

Wastewater treatment in the Planning Area is the responsibility of the Sewerage Commission Oroville Region (SCOR) composed of representatives of the City, LOAPUD, and TID acting under a joint powers agreement. SCOR's treatment plant on South Fifth Avenue has a design capacity of 6.5 MGD. Dry weather flows from the three member agencies range between 3 and 3.5 MGD. Wet weather flows can go as high as 17-17.5 MGD. Flows in excess of 12 MGD have to be stored and treated at a later time. The plant currently has enough capacity to serve more than 9,000 additional equivalent

dwelling units. Present excess capacity will be allocated on a first-come first-served basis to the three collection agencies. SCOR hopes to collect enough money from new connections to provide for future treatment plant expansion.

Objectives: Wastewater Collection and Treatment

- 7.32a Ensure that adequate wastewater collection and wastewater treatment services continue to be available to developed properties throughout the Planning Area.
- 7.32b Coordinate with each sewer service entity to ensure that adequate advance planning is accomplished to assure "adequate service" will remain available to serve the existing service sector population and the projected population.
- 7.32c Sewer service studies should be offered for peer review prior to formal adoption as a land use and growth control document.
- 7.32d Restrict the timing of any development proposal that cannot be adequately served at the time of development, to ensure that wastewater collection and wastewater treatment facilities are planned for and available without over-burdening existing facilities.

As specified in Policy 7.32f, "needed facilities" would, in the majority of cases, mean connection with a sewer conveying wastewater to the SCOR treatment plant; in some cases, it would mean provision of a septic system.

- 7.32e Coordinate with special districts providing sewer service to adjust service area boundaries where beneficial.

Implementing Policies: Wastewater Collection and Treatment

- 7.32f Require all development to be connected to a sewer conveying wastewater to the SCOR treatment plant, provided that in areas not served by sewers, development intensity equivalent to a single-family house on a 5-acre parcel may be served by a septic system, if soils provide adequate percolation.

Residential areas where connections to sewers is not feasible, are shown with a Very Low Density Residential designation on the Plan Diagram.

- 7.32g Offer the Master Sanitary Sewer Plan for peer review, prior to public hearings and City Council approvals.

The multijurisdictional environment of wastewater collection has made preparation and implementation of a comprehensive plan for the Planning Area difficult. The Master Plan,

under preparation in 1995, focuses on the northern and eastern sewer service areas, and will include: analysis and modifications or additions to the existing system to adequately serve land uses designated on the General Plan Diagram; approximate size, slope, and direction of all system elements and accessory improvements; estimated cost or proposed modifications and extensions and suggested alternative methods of financing.

- 7.32h Inform project developers of the discharge requirements for waste into surface water in conformance with guidelines set forth in the latest revision of the Regional Water Quality Control Board, Region 5 Plan.

The RWQCB's Water Quality Control Plan (Basin Plan) that affects the Planning Area's hydrologic sub-basin was most recently revised in March 1990.

- 7.32i Continue to support SCOR's requirement that, if necessary, industrial water users pretreat wastewater onsite prior to discharging into the sewer system, or into any permeable conduit or basin that ultimately could lead to groundwater contamination.

Wastewater pretreatment includes the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging these pollutants into a wastewater facility or public sewer. While pretreatment may not be necessary for all industrial uses, it is, in some cases, critical for water quality preservation. See also policies in Section 6.12.

- 7.32j Explore the possibilities of SCOR constructing and or operating an industrial wastewater system(s) separately from the domestic sewerage facilities to best serve the Greater Oroville Community.

8.0 SAFETY ELEMENT

8 SAFETY ELEMENT

The Safety Element is intended to outline policies necessary to protect human health and the community from both natural and human-induced disasters. While not considered a significantly hazardous place to live compared to other cities in California, the Oroville area has its share of environmental hazards. Those hazards are addressed in the Safety Element and are shown on GP Figure 8-A and on GP Figure 8.10-A.

The topics discussed in this Element include:

- geologic and seismic risks
- flood hazards associated with the Feather River's bisection of the City
- drainage issues related to other waterways traversing the Planning Area
- the potential risk inherent in the City's position below a major dam
- the potential fire hazards associated with living in or adjacent to a forested area

The Element also contains objectives and policies which address hazardous materials, the potential dangers associated with high-power transmission lines, potential risk of tornadoes, and general emergency management.

The disposal of solid waste, both hazardous and non-hazardous, is discussed in the Open Space, Natural Resources, and Conservation Element. Airport/aviation safety objectives and policies are contained in the Circulation Element of this General Plan.

CONSISTENCY WITH STATE PLANNING LAW

Mandated by State law (Government Code Section 65302(g)), the Safety Element must be prepared:

"for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence and other geologic hazards known to the legislative body; flooding; and wild land and urban fires."

This element addresses each of these issues as they are relevant to the City of Oroville, and was prepared in conformance with all legal requirements.

8.10 GEOLOGY, SEISMICITY, AND SOILS

GEOLOGY AND SOILS

The geology of the Planning Area can be viewed as both an asset and as a hazard. As an asset, the geology is the framework underlying a developing area and its unique landforms are a source of environmental interest and a potential tourist attraction. As a hazard, the geology presents challenges and constraints. Some of the constraints can be mitigated while others require that an area be preserved.

The Planning Area straddles the broad and geologically complex zone where the flat Sacramento Valley meets the foothills of the Sierra Nevada. Categorization of the types of deposits which underlie the area could involve consideration of over a dozen different types of rock and material. Three types are of particular note: bedrock, deposits of volcanic origin and sandstone. These are described in more detail in the General Plan EIR as are the hazards attendant with each. Portions of the Planning Area are subject to hazards including landslides, subsidence, erosion, expansive soils, steep slopes, and problems associated with the presence of wet areas due to a high groundwater table. GP Figure 8.10-A identifies areas of known landslides, areas prone to landslides, and steep slopes (greater than 30 percent).

SEISMICITY

California is laced with faults and fault systems, and those in the northern part of the State trend north-northwest, in line with the regional geologic fabric defined by the Sierra Nevada crest, axis of the Central Valley, and crest of the Coast Ranges. During the last 25 million years the Sierra Nevada has gradually uplifted relative to the Central Valley, and tilted westward. The faults located along the western flank of the Sierra Nevada which passes through the Planning Area are part of the Foothills fault zone. This zone is also known as the foothills shear or suture zone, and parallels the Sacramento Valley from Merced in the south to approximately eight miles north of Oroville.

The Cleveland Hills fault, last active in 1975, outlines a segment of the eastern boundary of the Planning Area, and is classified as an Alquist-Priolo Special Studies Zone making it subject to special development regulations. (The Alquist-Priolo Special Studies Zone is shown on GP Figure 8.10-A.) In addition to the hazards posed by the presence of the Cleveland Hills fault, it is also possible that the Planning Area would be affected by active faults which are located a considerable distance from Oroville. These faults include the Midland-Sweitzer, the San Andreas, the Hayward-Calaveras, the Russell Valley, and the Last Chance-Honey Lake faults. Additionally, there are some potentially active faults present, both mapped and unmapped within the vicinity of Oroville.

The General Plan EIR contains additional discussion of seismic issues and consideration of earthquake associated hazards. These hazards include fault rupture, ground shaking, liquefaction, slope collapse, dam-related disasters (such as dam failure or seiche), and induced seismicity. The Oroville Fire

Department maintains an Emergency Preparedness Plan (Multi-Hazard Functional Disaster Plan) which describes responsibilities in the event of several types of disasters, including earthquakes. (See Section 8.6, Emergency Management.) Prior to an emergency, however, there are preventive measures which may be taken to minimize or mitigate impacts. A strategy combining earthquake preparedness within developed areas, and restricting or limiting future development in currently undeveloped hazardous areas will lessen seismic damage. Seismicity objectives and policies discussed below reflect this dual approach.

Objectives: Seismicity, Geology, and Soils

- 8.10a Continue to protect lives and property by investigating and minimizing geologic and seismic hazards, or by locating development away from such hazards and endorse public awareness programs provided by other public agencies.

Areas of unmitigable hazards should be preserved as open space.

- 8.10b Support implementation of Butte County General Plan policies relating to geologic and seismic hazards, and consult a professional geologist where conflicting information exists or where no published information is available.

To some extent sources vary or present incomplete coverage of the locations of faults and areas subject to liquefaction, expansive soils, and landslides. It may be necessary to consult with a consulting geologist, as well as professional geologists employed by the U.S. Geological Survey (USGS) and the State Division of Mines and Geology (DMG), to resolve some of these issues, or to receive referrals to the latest sources of information. Butte County policies emphasize avoidance of hazards where possible, community education, and the use of appropriate engineering measures to allow safe development.

Implementing Policies: Seismicity, Geology, and Soils

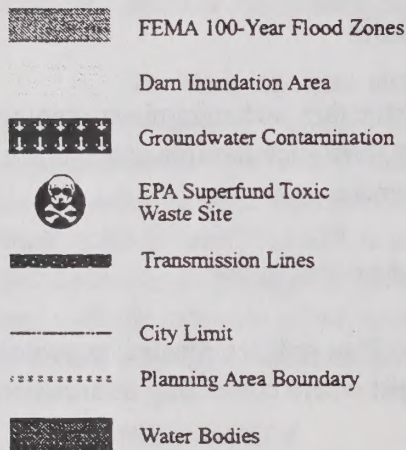
- 8.10c Continue to restrict development within Alquist-Priolo Special Studies Zones.

California's Alquist-Priolo Special Studies Zone Act went into effect in 1973, and has been amended several times. The purpose of this Act is to prohibit the location of most structures for human occupancy across the traces of active faults, thereby reducing the hazard of fault rupture. Under the Act, the Division of Mines and Geology (DMG) has delineated Special Studies Zones (SSZs) along active faults in California. Jurisdictions containing these zones must then regulate the type and intensity of development within

OROVILLE PLANNING AREA

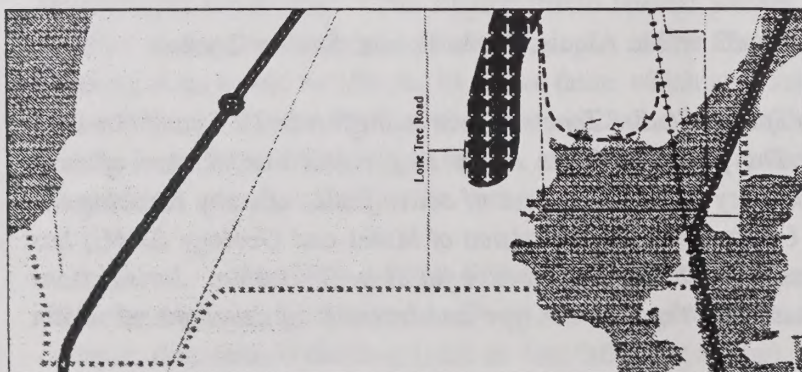
Environmental Hazards

GP Figure 8-A

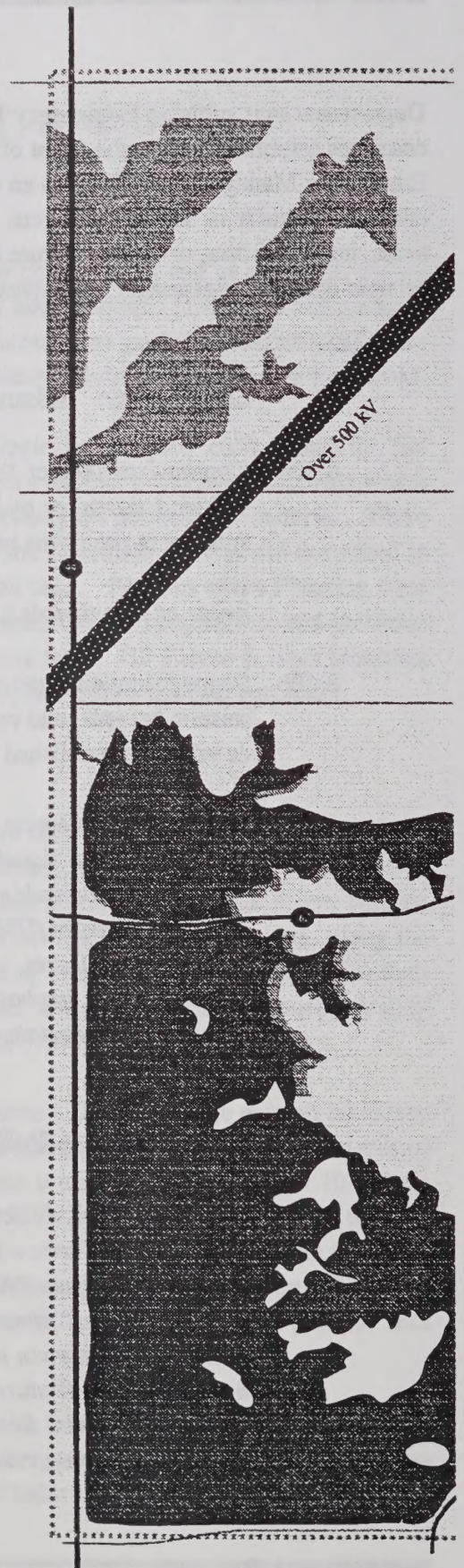


Note: FEMA=Federal Emergency Management Agency; and EPA=United States Environmental Protection Agency.

Sources: FEMA FIRM (1984-1989); Inundation maps for Oroville Dam (1969-1970); Koppers Update Newsletter (1989) and Beazer East, Inc. Update Newsletter (1991) show groundwater contamination; City hazardous sites map (1991); Butte County Planning Dept., Railroad and Utility Corridors, Figure 3, shows electrical transmission corridors; Pacific Gas and Electric provided updated electrical transmission corridors (1992); Department of Water Resources provided information on their electrical transmission corridors (1992).

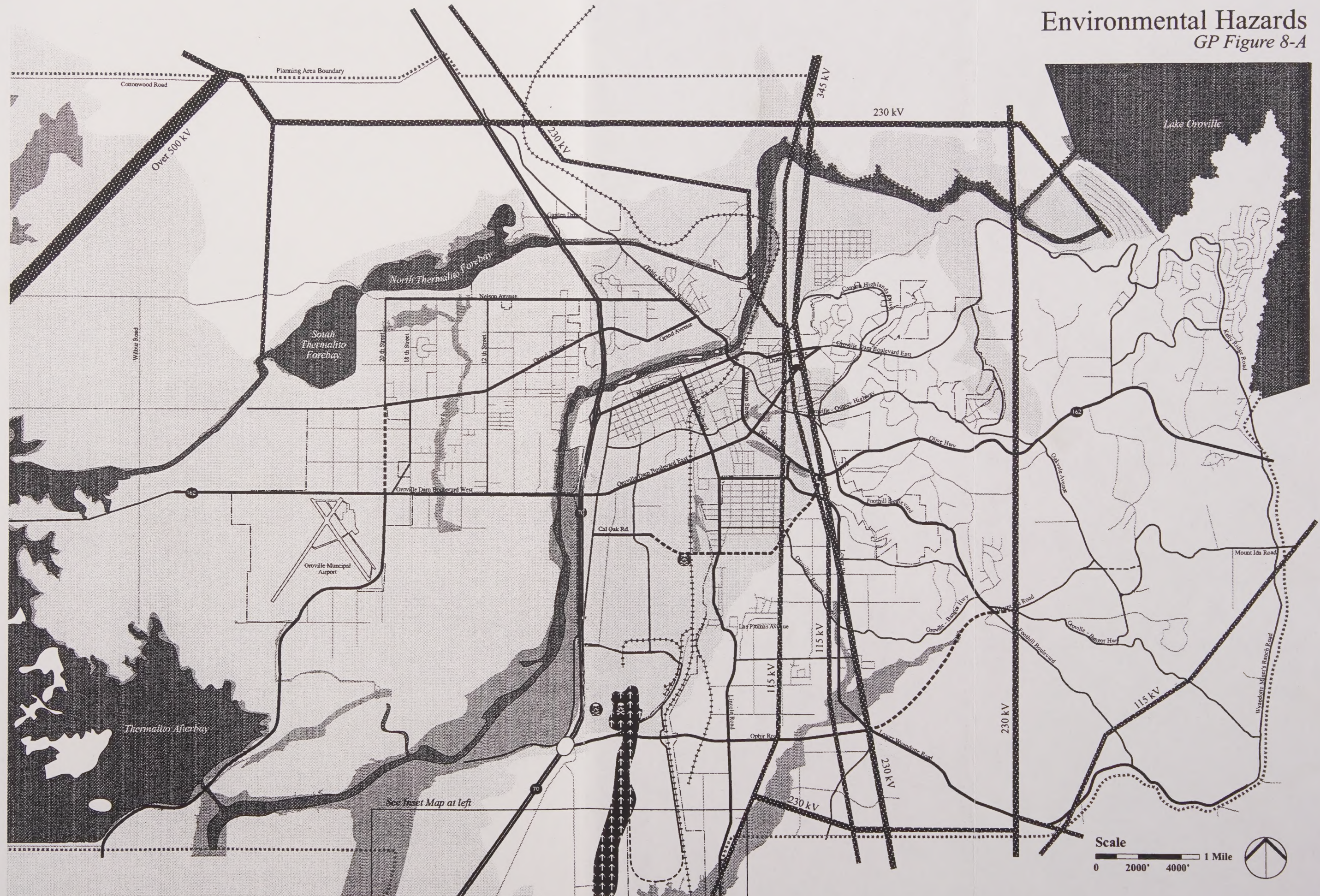


Southern extension of Planning Area



Environmental Hazards

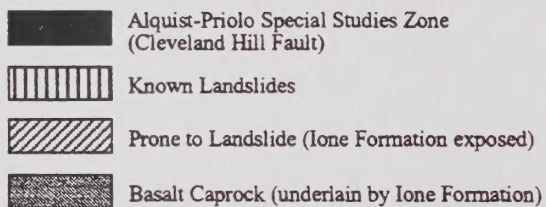
GP Figure 8-A



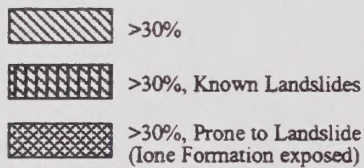
OROVILLE PLANNING AREA

Geologic Hazards

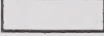
GP Figure 8.10-A



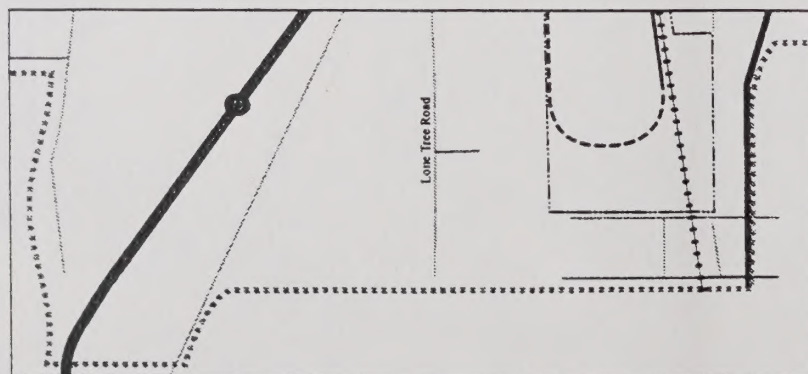
Slope >30%



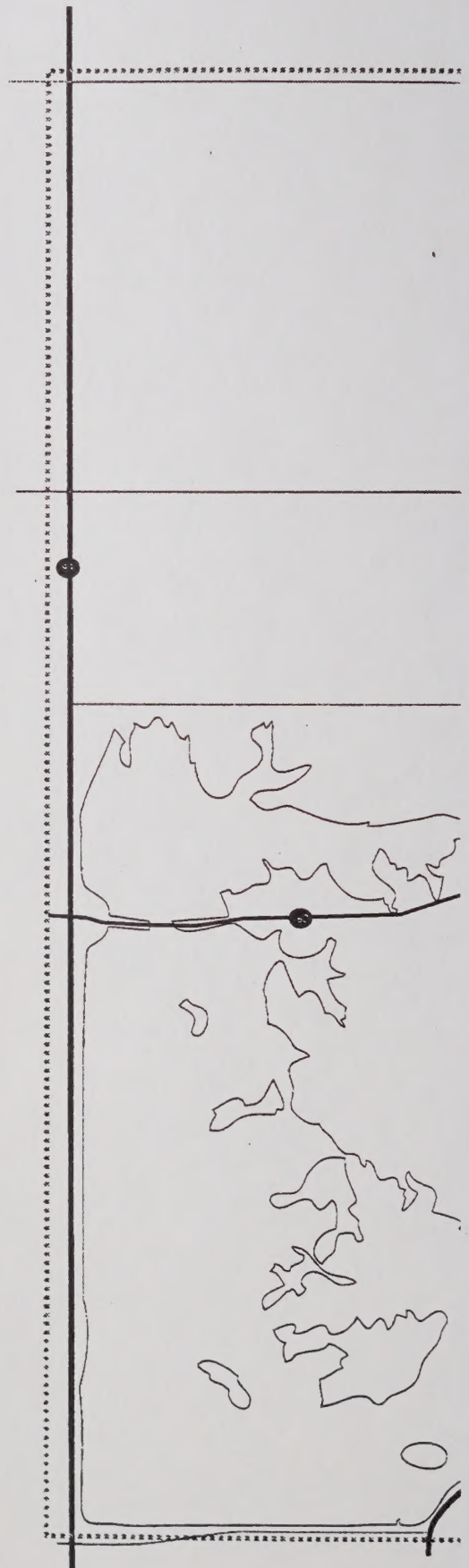
— City Limit

 Water Bodies

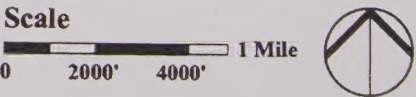
Sources: Cole and McKunin, Dept. of Water Resources, 1978; Helley and Harwood, USGS, 1985; Division of Mines and Geology, Alquist-Priolo, Special Studies Zones, Bangor Quadrangle Official Map, 1977; Slope Mapping by Blayne Dyett Greenberg, based on USGS Quadrangles.



Southern extension of Planning Area



Geologic Hazards
GP Figure 8.10-A



them. The Cleveland Hills Fault has been classified as a Special Studies Zone under the Alquist-Priolo Special Studies Act, and is identified on GP Figure 8.10-A.

- 8.10d Require areas identified as having significant liquefaction potential to be subjected to a geotechnical study prior to development approval and to mitigate the potential hazard to a level of insignificance; if mitigation is not possible, preserve these areas as Environmental Conservation/Safety or in agriculture.

The Butte County Seismic Safety Element identifies portions of the Planning Area underlain by older alluvial sediments as having a generally low susceptibility to liquefaction. Areas along waterways or consisting of recent sand and gravel alluvium and fill can have moderate to high liquefaction potential. Bedrock portions of the Planning Area are assumed to have no liquefaction potential.

- 8.10e Monitor studies related to induced seismicity; if further studies establish a conclusive relationship between reservoir drawdown, refilling, and seismic activity, encourage the Department of Water Resources to manage the Oroville Dam water regime to reduce risk.

Evidence thus far suggests a relationship between reservoir drawdown, refill, and subsequent seismic activity. This was seen in the 1975 Cleveland Hills earthquake, thought to have occurred after unprecedented drawdown and refilling of Lake Oroville.

- 8.10f Use the building inspection program to inventory and evaluate earthquake hazards in existing buildings, and work towards the systematic upgrading of seismically unsafe buildings.

Unreinforced masonry buildings are a vulnerable type of construction, and, as a result of a growing awareness throughout California, new standards for abatement and retrofitting are being defined. The Downtown core area contains a number of unreinforced masonry buildings, many of which are recognized as historically significant structures, and are listed on the National Register of Historic Places as belonging to part of the Old Oroville Commercial District.

- 8.10g Develop a City-based public awareness and preparedness program to educate the public of the potential for earthquakes and other natural disasters (such as tornadoes) within the Planning Area, and what to do in the event of an earthquake or other disaster.

Hazard education could take the form of distributing an information pamphlet through libraries, schools, or utilities bills, and community-wide simulations. The City should coordinate with Butte County in encouraging community education regarding the nature, extent, and appropriate response to earthquake and other hazards.

- 8.10h Regulate development on unstable slopes to minimize hazards.

This policy is designed to preserve natural landforms and vegetation, prevent mass grading and protect water quality, and reduce landslide risks. See also objectives and policies in Section 3.30, especially Policy 3.30k.

- 8.10i For sites where a preliminary soils report indicates the presence of critically expansive soils, surfacing groundwater, or other soil problems, require geologic soils investigations prepared by a registered civil engineer to determine the extent of and mitigation for geologic hazards.

Expansive soils have the potential for shrinking and swelling with changes in moisture content, which can cause damage to overlying structures. The amount and type of clay in the soil influences the changes. According to the Butte County General Plan Safety Element (1977), much of the Oroville Planning Area contains soils rated in the highest class of shrinkage and expansion. By contrast, the sand and gravel alluvial deposits and dredge tailings in the Planning Area have no potential for volume change due to moisture change.

Types of subsurface exploration associated with proposed construction might determine the degree of shrink-swell potential, compaction and potential for settling, saturation values, strength of materials, shear values, and presence of subsurface faults.

- 8.10j Encourage project design which minimizes the potential for wind and water erosion to occur. Where necessary, require the preparation and implementation of a soil erosion plan, including soil erosion mitigation during construction.

Thoughtful construction practices can minimize erosion. Measures might include removing the surface cover from the soil only when construction is ready to begin, uncovering soil only at construction sites, avoidance of grading during the wet season, covering stockpiles of soil, and erecting berms, barriers, or temporary settling ponds to direct runoff away from cleared areas and trap sediments before they enter surface waters.

The Butte County Draft Energy, Natural Resources, and Recreation Element (November 1989) requires that Erosion Control Plans be prepared for all projects requiring earthwork and, where erosion cannot be avoided, sediment traps are to be employed, and restoration plans prepared and implemented. The RWQCB also encourages erosion plans, as described in Section 6.12.

- 8.10k Request and encourage the Division of Mines and Geology to comprehensively map landslide susceptibility throughout the Planning Area.

Some susceptible areas have been mapped on publicly available maps, but a comprehensive effort has not been undertaken. A landslide susceptibility map and subsequent evaluation of technologically feasible and environmentally acceptable mitigation would allow a determination of development potential in affected areas.

- 8.101 Continue to monitor ongoing studies identifying potentially active faults or fault segments.

The Division of Mines and Geology Fault Evaluation Program can provide updates to the Planning Department, when requested.

8.20 DRAINAGE AND FLOODING

DRAINAGE

The Planning Area is a part of the Sacramento River Basin region, which encompasses about 26,500 square miles. The Feather River bisects the Planning Area and is one of the larger tributaries of the Sacramento River. During the wet season (approximately October to April) Butte County normally receives 90 percent of its annual precipitation, with rain in the lower elevations and snow in the higher elevations. Snowmelt occurring in the late spring and early summer months contributes to large streamflows in the spring. These streamflows are at their lowest by late summer.

The majority of Butte County's water supply originates in the Feather River watershed and accumulates in Lake Oroville. After passing through the Edward Hyatt Powerplant, a portion of the flow heads west via the Thermalito Power Canal, to the Forebay and through the Thermalito Powerplant, ending up in the Thermalito Afterbay. Water not diverted into the Power Canal flows through the Thermalito Diversion Pool within the historic Feather River Channel, outlines the northern boundary of the Old City, and turns south, then southwest for the remainder of its journey through the Planning Area. The waters of the Afterbay connect with the Feather River flows in the extreme southern portion of the Thermalito planning sector.

Drainage Responsibilities. Both the City and the County are responsible for drainage flows and providing flood protection to residents. Drainage flows pass through the Planning Area in unimproved, natural bottom channels and through improved lines. The sloping topography of the central and eastern parts of the Planning Area is a drainage asset, since it aids in the force of gravity flows; however, the presence of slopes can also concentrate flows and can exacerbate geologic hazards, such as erosion or landsliding.

It is anticipated that without regional coordination of drainage improvements, the burden of the cost of improvements could be distributed inequitably, with development which occurs later having to contend with the cumulative impacts of prior incremental decisions. Coordination of all drainage considerations within a drainage basin would be preferable to project-specific or jurisdiction-specific mitigation measures.

Local drainage studies. The Planning Area is comprised of a number of hydrologic basins, or watersheds, drained by streams and creeks. While the entire Planning Area's drainage has not been comprehensively mapped several studies undertaken over the last ten years summarize issues in four separate areas. The studies illustrate that portions of the Planning Area are subject to local ponding and flooding.

Most of the improvements discussed in the studies have not yet been funded or implemented, since they are development dependent, and growth has occurred at a lower rate than projected. Study of the Dry Creek drainage basin led to a City of Oroville ordinance providing specifications for required improvements within the Dry Creek drainage.

The most recent study is the City of Oroville's Drainage Master Plan which looks at four sub-areas within the Dry Creek watershed and adjacent Feather River. This plan covers much of the Old City and Northeast planning sectors, and part of the South Side-Las Plumas planning sector.

Recommendations for proposed improvements as a result of this study include:

- Area A: Culvert enlargement and detention facilities. Recommend maintaining channel sections in their natural state wherever possible due to steep terrain, peak flow attenuation, desired land use, and aesthetic requirements.
- Area B: Detention facilities in flat regions with pumping facilities for peak flows. Require building pads to be built above Feather River flood stage elevations.
- Area C: Earth channels (unless development constraints require portions of the reach to be constructed with concrete channel or pipe). If area A basins are not constructed, all road crossings of Dry Creek except 7th Street bridge will need to be increased, including grading as necessary, and channel improvements.
- Area D: Relief drains and new gravity lines, maintenance and automation of the existing pump station at Safford and Huntoon streets, possibly a new pump station at the north end of Oliver Street.
- Control of Feather River: A great deal of future improvements, such as pump stations and sizing of gravity outfalls, are dependent on the high water elevations of the Feather River.

Using the expected 100-year release of 150,000 cubic feet per second from Lake Oroville results in flooding of approximately one third of Area C and creates the need for significantly large gravity outfall pipes in Area D to achieve an acceptable hydraulic grade through the system; the high water creates the need to pump more flow at a higher head from the Area B outfall pump station. If altering the operating procedures at Oroville Dam could reduce the 100-year release by 20 percent, Area C would experience little or no flooding, and Areas B and D facilities could be reduced in scope and size with very significant reductions in costs.

The Drainage Master Plan is currently (1995) being modified and implemented. Further studies are to be done on Area B, grants are being sought for improvements, fee adoption is anticipated, and an ordinance is planned for adoption that will specify the need for areawide retention and detention basins vs. requirements for onsite detention.

The Wyman Ravine Watershed Study, completed in 1981, includes three basins: the Upper Basin, including that area which is the tributary to Wyman Ravine at the Palermo Road bridge and drains portions of the Foothills and South Side-Las Plumas planning sectors; the Palermo Basin, which drains into Wyman Ravine to the southwest of Palermo, primarily outside of the Planning Area; and the Lower Basin, which is located outside of the Planning Area. Additional study on the Wyman Ravine drainage basin may be needed.

The Master Drainage Plan for the Thermalito Area, prepared for the City of Oroville in 1980, identifies two major and nine minor drainage basins within its study area. This area comprises approximately the southern third of the North planning sector. All of these basins drain to the Feather River or its floodplain.

A Master Drainage Plan for the unincorporated part of Thermalito was prepared for Butte County in 1979, and amended in 1980. This study area is directly east of the area studied in the City's Master Drainage Plan for the Thermalito area described above. This includes the Thermalito planning sector between Nelson Avenue and Oroville Dam Boulevard, from south of the eastern edge of the south Thermalito Forebay to Highway 70 in the east. Four major and one minor drainage basins were identified: the Ruddy Creek Basin, which drains to the south into the Oroville Wildlife Area and ultimately into the Feather River; the East Basin, which flows into the Feather River; a small basin east of the East Basin, which has poor drainage and cannot reach the Feather River due to the presence of bluffs; the West Basin, which also drains into the Oroville Wildlife Area and ultimately into the Feather River; and the Southeast Basin, which drains into a cobble and gravel sink-hole under Oroville Dam Boulevard.

FLOODING

The Planning Area's position downstream from a major dam places it in an unusual category of flood risk. The presence of the Oroville Dam and the large storage capacity of the Lake has

greatly reduced and nearly eliminated flood risk along the Feather River. Yet the presence of a huge volume of water upstream of the City raises the possibility of inundation in the unlikely event of dam failure.

Dam inundation. The Oroville Dam detains the waters of the Feather River, confining them to Lake Oroville, which has a maximum operating storage of about 3,537,580 acre-feet. At the time of its completion in 1968, the Oroville Dam was the highest earthfill dam in the United States, rising 770 feet above streambed excavation and spanning 5,600 feet between abutments at its crest.

As shown on GP Figure 8-A, much of the western portion of the Planning Area could possibly be affected by floodwaters following a failure of the Oroville Dam. According to the Department of Water Resources, which operates the facility, engineering studies done after the 1975 earthquake to determine whether the structure could withstand a 6.5 Richter magnitude event showed conclusively that it could. The DWR believes that a 6.5 Richter magnitude earthquake exceeds the maximum credible earthquake for the region.

Flood plains. Flood plains, the relatively level land areas on either side of a waterway subject to regular flooding, serve multiple functions. Within the Oroville Planning Area, most of the land where the City now lies would have historically been considered part of a broad Feather River flood plain. Due to modification of the waterway and surrounding development which has occurred over the last 150 years, the Feather River and other waterways within the Planning Area have been confined to established courses, diminishing their power to carve new drainages and expand flood plains. The existence and condition of flood plains varies from narrow streamside bands of land maintained in natural vegetation to areas bordering larger waterways. Some of the waterways are closely bound by levees or channeled to contain flows, eliminating the need for a flood plain.

Maintaining flood plains as open space buffers urban uses from the waterway and protects lives and property from seasonal or episodic flood dangers. Flood plains can also play an important recreational role, providing water access for fishing; trailways for hiking, bicycling, and equestrian activities; and functioning as links between larger recreation and open space areas. (See also Section 7.10, Section 7.11 and Objective 6.11h.) In or adjacent to urban areas and where views are not blocked, flood plains provide an aesthetic benefit, visually breaking the urban landscape with an expanse of open terrain.

Vegetated portions of the flood plain can serve as valuable wildlife habitat. Flood plains that are unrestricted by flood improvements may provide wildlife corridors as contiguous strips of vegetated cover adjacent to waterways. (See also Section 6.11.) In addition, flood plains may contain natural vegetation uniquely adapted to the flooding cycles of a particular region.

Flood plain condition has an impact on water quality, since sediment outflow from a watershed can be directed to either a flood plain or waterway depending on the area's topography. If the area is sloped and vegetated advantageously, outflow from a watershed or drainage basin can be deposited

within a flood plain rather than a waterway. (See also Section 6.12.) Conversely, a flood plain which is not properly sloped and vegetated can have an adverse impact on water quality, with erosion occurring and sedimentation clouding the water. Flood plains may also serve as collection areas for groundwater recharge.

Balancing the multiple functions of flood plains requires the cooperative efforts of several agencies. Agencies that either own or cooperatively manage flood plains within the Planning Area include the State Department of Water Resources (DWR), State Department of Parks and Recreation (DPR), Feather River Recreation and Park District (FRRPD), State Department of Fish and Game (DFG), Army Corps of Engineers, Butte County, and the City of Oroville.

FEMA 100-year flood zones. The 100-year flood is that flood event that has a one percent chance of occurrence in any one year. Federal Insurance Rate Maps (FIRM) prepared by the Federal Emergency Management Agency (FEMA) show the extent of the 100-year flood zone in the Planning Area. These areas are shown on GP Figure 8-A. For planning purposes, the 100-year flood zone is considered a "no development" zone, unless improvements that mitigate flooding are implemented.

Aside from those waterways directly downstream from the Oroville Dam whose floodwaters are projected to be generally confined to their channels or immediate floodplains, there are few local waterways that pose a flood threat. As illustrated in GP Figure 8-A, Cottonwood Creek in the northwestern part of the Thermalito planning sector can exceed its channel during a 100-year flood event. This also occurs within the Wyman Ravine. Additionally, there are isolated pockets throughout the Planning Area identified as potential 100-year flood threats on the FEMA maps, or areas identified in the drainage studies cited above as problematic local flows.

Water table, recharge, channels. In addition to the necessity of an unimpeded drainage route for storm flows, consideration must be given to the level of the groundwater in each micro-region, and whether flows are traveling through a natural or a culverted channel. The groundwater level affects the amount of water a soil can absorb before surface flows cause flooding. The permeability of the channels determines whether drainage will pass entirely through a basin to be deposited elsewhere, or whether some of the flows will percolate into the aquifer, contributing to groundwater recharge and possible soil saturation.

Objectives: Drainage and Flooding

- 8.20a Continue to protect lives and property and ensure that structures existing and proposed, for sites located within flood plains are provided adequate protection from flood damage and hazards.

100-year flood boundaries are shown on GP Figure 8-A. Common methods of floodproofing an existing structure include constructing a small, encircling levee or floodwall, elevating the structure, or sealing it for watertightness.

- 8.20b Preserve as open space those areas that cannot be protected from flood hazard.

Critical flood hazard areas are depicted as Environmental Conservation/Safety on the General Plan diagram.

- 8.20c Support a multi-use concept of flood plains, flood-related facilities, and waterways, including, where appropriate, the following uses:

- flood control
- groundwater recharge
- water quality preservation
- mineral extraction
- open space
- agriculture
- nature study
- habitat preservation
- pedestrian, equestrian, and bicycle circulation
- outdoor sports and recreation.

Balancing flood control with other uses involves prioritizing among uses, and must be an ongoing process. For example, implementation of a trails or bikeways plan will require close coordination between the City and several other agencies to ensure that flood protection and habitat value are not compromised by trail use, and vice versa. See also Section 7.10, Section 7.11 and Objective 6.11h.

- 8.20d Where feasible given flood control requirements, maintain the natural condition of waterways and flood plains to ensure adequate groundwater recharge and water quality, preservation of habitat, and access to mineral resources.

See also Objective 6.12b.

- 8.20e Support the intent of Butte County's flood control policies as specified in the *Draft Energy, Natural Resources, and Recreation Element* (November 1989).

The County's flood policies specify participation in the Federal Flood Insurance Program, encourage striving to effect savings in the cost of flood control projects by coordinating

with other public utility and private projects, and ensure that agricultural lands located in flood plain areas are retained for agricultural uses.

- 8.20f Cooperate with all affected or interested public and private agencies involved to ensure that flood control improvements do not result in unacceptable degradation of environmentally sensitive areas.

While the California Environmental Quality Act (CEQA) provides protection to special status species, "habitats" per se are not recognized nor protected under CEQA. Species that are known locally to be sensitive may not be listed by the State or Federal governments as Rare, Threatened, or Endangered. Locations of sensitive species and habitat areas are expected to be better identified after preparation of a Master Biotic Data Base, as specified in Policy 6.11l. The presence of important biotic resources suggests that close coordination is necessary between the City and other public and private agencies that are involved in flood control improvements in the Planning Area.

Implementing Policies: Drainage and Flooding

- 8.20g Coordinate and maintain the existing Master Drainage Plan(s), organized by drainage basin, rather than by project or jurisdiction, for the entire Planning Area based on build-out of the General Plan.

This approach requires the City to work closely with all concerned special districts, Federal agencies such as the U.S. Army Corps of Engineers, the State (including the Department of Water Resources and Department of Parks and Recreation), Butte County, and with private developers and property owners. Implementation of a Master Drainage Plan that is organized by Planning Area drainage basins will ensure that coordination will occur.

- 8.20h For drainage basins not subject to prior study, prepare a drainage study for incorporation into the City's Master Drainage Plan. Master drainage plans shall be offered for peer review prior to review and approval by the City Council.
- 8.20i Use the appropriate City drainage plan to determine whether to require storm drainage analysis for projects within the Planning Area, and, if necessary, make storm drainage improvements a condition of development approval.
- 8.20j Require that developers pay their fair share for construction of off-site drainage improvements, where necessary as determined by the appropriate City drainage plan.

This policy reflects requirements of the Dry Creek Ordinance and the Thermalito Master Drainage Plan.

- 8.20k Reduce the effects of surface runoff in developing areas by the use of extensive landscaping with an emphasis on native and drought-resistant species, minimizing impervious surfaces, and providing for recharge.

See also Policy 7.31h.

- 8.20l Prior to project approval in the vicinity of a waterway or drainage course, consult Flood Insurance Rate Maps on file with the Planning Department to identify areas that have not been subject to detailed study; if the project falls within an area that has not been studied, require studies and, if necessary, require mitigation or restrictions on development.

Since Federal Emergency Management Agency (FEMA) flood studies of uninhabited areas are frequently not as detailed as those done for inhabited areas, sparsely populated areas slated for further development may need additional study to determine the historical extent of flooding.

- 8.20m Identify critical facilities in flood hazard areas and within the Oroville Dam inundation area, and seek ways to improve their level of protection, if possible.

Critical facilities provide fire and emergency services, water, electricity, gas supply, sewage disposal, communications and transportation. Various measures may be employed to upgrade protection of critical facilities.

- 8.20n Encourage timely FEMA map changes and annually incorporate mapped revisions to the 100-year flood zone into City hazards maps.

With completion of flood improvements throughout the Planning Area, the boundary of the 100-year flood zone will change. These changes should be promptly incorporated into existing maps.

- 8.20o In the event of dam failure on the Oroville Dam, implement emergency measures consistent with the City's Multi-Hazard Functional Disaster Plan.

Dam failure, while considered unlikely, is among the hazards mentioned in the City's Multi-Hazard Functional Disaster Plan. The projected dam inundation area is shown on GP Figure 8-A.

CITY OF OROVILLE
RESOLUTION NO. 5424

**A RESOLUTION AMENDING THE SAFETY ELEMENT OF THE GENERAL PLAN
BY ADDING TWO GOAL STATEMENTS TO THE IMPLEMENTING POLICIES**

WHEREAS, public hearings have been held before the Planning Commission and the City Council of the City of Oroville, relative to the adoption of an amendment to the Safety Element of the General Plan; and

WHEREAS, this project is subject to the general rule that the California Environmental Quality Act (CEQA) applies only to projects which have the potential for causing significant effects on the environment. It has been determined that this application is a General Rule Exemption under Section 15061(b)(3) of the California Environmental Quality Act Guidelines.

WHEREAS, the Planning Commission has recommended that the Safety Element of the General Plan be amended; and

WHEREAS, it is in the best interests of the City of Oroville that the change be approved and the General Plan be so amended.

NOW, THEREFORE, the Council of the City of Oroville do ORDAIN as follows:

SECTION 1. The Safety Element of the General Plan is hereby amended to include the following goal statements:

8.30h Fire Department travel times should strive to place a first-due unit at scene within five minutes travel time, for 90% of fire and medical incidents.

8.30i Fire Department units should be located and staffed such that an effective response force of four units with eight personnel minimum should be available to all areas of the City within a maximum of ten minutes travel time, for 90% of all structure fires.

1 **SECTION 2.** The City Clerk shall attest to the adoption of this Resolution.

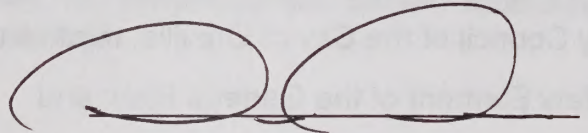
2 **PASSED AND ADOPTED** by the Oroville City Council at a regular meeting held on
3 April 6, 1999 by the following vote:

4 **AYES:** Alt, Hatley, Koslin, Morgan, Sands, Andoe, Diver

5 **NOES:** None

6 **ABSTAIN:** None

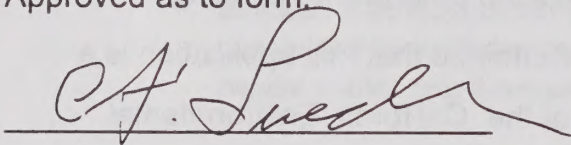
7 **ABSENT:** None



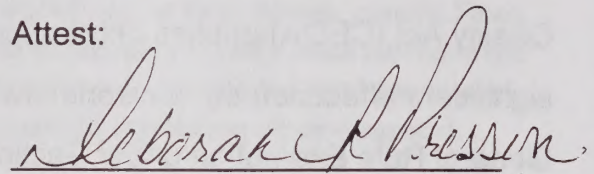
Mayor

10 Approved as to form:

Attest:



City Attorney



Deputy City Clerk

17 R5424

8.30 FIRE HAZARDS

Within Butte County fires have been more frequent in the Central Valley than in the mountainous areas in recent years. From 1984 to 1988, an average of over 650 fires per year occurred in the Valley compared to under 475 fires in the foothills and mountains. Most of the Valley fires were grass fires near populated areas, including Oroville. Although less frequent in occurrence, fires in the foothills and mountainous areas may be more severe than flatland grass fires due to the difficulty of access and the lack of water for firefighting. In 1990 a fire occurred along the eastern City boundary which burnt 120 acres in less than one hour and threatened dozens of homes. The California Department of Forestry and Fire Protection (CDFFP) reports that a significant amount of resources (engines, aircraft, bulldozers, handcrews) were required to suppress the blaze.

Potential fire sources include residential and agricultural burning. Residential burning (incinerators and small piles) is allowed throughout the Planning Area, and the CDFFP notes that it poses a significant fire problem during the summer months. Agricultural crops are burned within the Planning Area, and can also be a potential fire hazard due to their large size.

Areas at greatest risk of severe events are those wildlands in the northern and eastern portions of the Planning Area that are heavily forested and where access is difficult. This land is part of the State Responsibility Area (SRA). According to the State Board of Forestry, the fire agencies in California no longer have the equipment or funding necessary to provide an engine to protect each home during large wildland fires. Implementation of the concept of "defensible space" is necessary to mitigate wildland fire structural losses. This can include providing water, adequate roads, clearance of flammable vegetation surrounding homes or proper building identification. If "defensible space" is not provided, the increase in the loss of homes to wildland fires will continue.

Section 4290 of the Public Resources Code (1977) requires the Board of Forestry to adopt minimum fire safety standards applicable to SRA lands under the fire protection authority of the CDFFP. All residential, commercial, and industrial buildings constructed after the effective date of the regulations within State Responsibility Areas (SRAs) will be required to comply. The regulations adopted by the Board must include the areas of 1) road standards for fire equipment, 2) standards for signs identifying streets, roads, and buildings, 3) minimum private water supply reserves for emergency fire use, and 4) fuelbreaks and greenbelts.

This statute was adopted by the legislature to deal with California's increasing fire protection problem. Between 1923 and 1990, over 5,300 homes were destroyed by wildfire and 149 lives lost. More than half of those homes were destroyed between 1970 and 1990. Increasingly, the loss of homes is not confined to the remote foothills and mountains of the state, but also occurs in subdivisions and developments that are contiguous to or intermixed with the wildlands. Statewide, over two million residences now exist in the wildlands.

FIRE PROTECTION

Fire protection within the Planning Area is provided by the City of Oroville Fire Department, the El Medio Fire District, and the joint efforts of the Butte County Fire Department and the California Department of Forestry and Fire Protection (CDFFP). The City of Oroville Fire Department serves the incorporated City. El Medio serves a portion of South Side-Las Plumas. (See GP Figure 1.90-A.) Butte County provides structural and non-structural fire protection in remaining unincorporated areas. CDFFP provides non-structural fire protection in State Responsibility Areas, north and east of the City limits during the summer months, and contracts to provide additional year-round assistance to the County within other unincorporated areas.

City of Oroville Fire Department. The City of Oroville Fire Department (OFD) serves the 12.16 square miles (7,680 acres) of incorporated Oroville, operating from the Police and Fire Department joint headquarters at Lincoln Street near Mitchell Avenue.

As future development occurs, the OFD plans to locate new stations within the community. Specific locations will be based on the City's efforts to comply with ISO recommendations for fire engine response within the built areas of the City. Four new satellite stations are proposed within the Planning Area, with general locations as follows:

- South of Oroville Dam Boulevard and Challenger Avenue, west of Chuck Yeager Way, at the Oroville Municipal Airport;
- Ophir Road and Lincoln Boulevard area;
- North of Olive Highway, where Glen Drive intersects the Oroville Quincy Highway; and
- In the Kelly Ridge Road and Hillcrest Avenue area, on the ridge, to replace the CDFFP station that is now at the base of the ridge.

Under mutual aid agreements with the other fire services providers, OFD may provide service outside of incorporated Oroville, and may receive help from other providers during emergencies. Automatic aid agreements are now in effect with the Butte County Fire Department and El Medio Fire District. Automatic aid implies not only mutual aid in situations of need, but also first response by the department which can respond the fastest regardless of jurisdiction. As of 1994, the OFD has 20 paid personnel, 15 volunteers, and one secretary.

The Insurance Service Office (ISO) rates jurisdictions based on fire risk. The ISO's Fire Suppression Rating Schedule contains ten possible classes, with a rating of Class 1 being the best (lowest fire risk) and achieved by only a handful of communities in the United States, and Class 10, the worst. Factors determining a rating include available water supply, apparatus, training, equipment, and the

jurisdiction's alarm notification and dispatch system. The rating is periodically reviewed, if population changes warrant, or if requested by the community.

Oroville maintains a split rating. Portions of the City within 1,000 feet of a fire hydrant are rated Class 3. The rest of the City is rated Class 9, a rating it shares with many rural, non-hydranted parts of the country. If over 85 percent of an area becomes protected by municipal water, the ISO tends to publish a straight class rating, rather than a split rating.

While sufficient water is available throughout the incorporated City for fire protection, anticipated industrial development in the vicinity of Ophir Road has led to plans to install a water well to increase capacity. The well will be leased to the California Water Service once completed.

El Medio Fire District. Established as a special district in 1929, the El Medio Fire District (EMFD) covers approximately 1.7 square miles (about 1,100 acres) and serves approximately 4,000 people in the South Side-Las Plumas planning sector. District boundaries are shown on GP Figure 1.90-A. The EMFD provides structural and non-structural fire protection, medical aid, and heavy rescue services. A single station, at Myers and D Street in South Oroville, is manned by a full-time paid staff of six and a volunteer force of 30. Response time within the EMFD boundaries is two minutes or less, and the District maintains a current ISO rating of Class 6. District fire protection services are adequate to meet the needs of area residents. It is anticipated that these services can be expanded to serve infill development within the District boundaries. Under an agreement with the City, the EMFD will not increase in area. If the County area where EMFD operates is annexed to the City of Oroville within the 20-year planning horizon, LAFCO has recommended EMFD be dissolved upon annexation.

Butte County Fire Department/California Department of Forestry and Fire Protection/Volunteer Fire Companies. The Butte County Fire Department (BCFD) protects approximately 1,600 square miles with a population of nearly 100,000, and operates from 12 full-time stations. Much of Butte County has an ISO rating of 5. The BCFD engages in watershed fire protection; coordination of all mutual aid fire and rescue resources between Federal, State, County, and City agencies; and back-up support for the five departments within the County on virtually all multiple alarm incidents, and some first alarm incidents.

Within the Oroville Planning Area, the Butte County Fire Department shares jurisdiction over the unincorporated areas with the California Department of Forestry and Fire Protection (CDFFP). A contract between the County and CDFFP houses CDFFP personnel in County facilities, operating County equipment, and working with County employees, and thus the distinction between the two agencies is not functionally significant.

To the north and east of the incorporated City, CDFFP provides wildland fire protection to State Responsibility Areas (SRAs) during the summer months, while BCFD provides year-round service. SRAs consist of wildlands and implied associated vegetation. The areas north and east of the City, which

include portions of the North, Northeast, Kelly Ridge, and Foothills planning sectors, are served primarily by the Kelly Ridge Fire Station on Walnut Avenue.

Elsewhere within the unincorporated portions of the Planning Area, lands are considered Local Responsibility Areas (LRAs), and are served jointly by BCFD and CDFFP. The Nelson Avenue Fire Station, also the headquarters of the BCFD, serves the Thermalito planning sector and vicinity. Another station in Palermo, outside of the Planning Area, serves a portion of the South Side-Las Plumas planning sector, south of the El Medio Fire District jurisdiction.

County volunteer firefighters number over 400, and the Volunteer Fire Company is housed at the County headquarters station on Nelson Avenue. Volunteers are an essential part of the fire protection system, and the Kelly Ridge and Palermo volunteers assist in operations within the Planning Area. The County has mutual aid agreements with all fire services agencies.

The *Butte County Draft Energy, Natural Resources, and Recreation Element* specifies the enforcement of fire protection measures for residential areas as required by the CDFFP, including the following: maintenance of a defensible space around residences by clearing all flammable vegetation within 30 feet of structures; regular removal of pine needles and leaves from roofs, eaves, and gutters of residences; maintenance trimming of trees ten feet away from the chimney and removal of all dead limbs hanging over the house or garage; and protective covering of chimney outlets or vents with a spark arrester. The *Draft Element* also recommends that the BCFD develop a system for monitoring high fire risk areas to ensure compliance with these measures, and the potential adoption of a schedule of fines to discourage noncompliance.

In remote areas or areas of difficult access, the *Draft Element* further recommends a minimum water storage supply for emergency use, maintenance of a well-pruned and watered landscape in the 30-foot defensible space around residences, standards for roofing materials, adequate all-weather access to all residences and identification of two escape routes from properties, and clearly marked street signs and addresses.

Objective: Fire Hazards

- 8.30a Work to prevent wildland and urban fire, and protect lives, property, and watershed from fire dangers.

Implementing Policies: Fire Hazards

- 8.30b Within the built areas of the City, strive to comply with ISO recommendations for fire engine response.

Although future fire station locations are shown schematically on the General Plan Diagram, these locations may be adjusted, and additional sites added, if necessary, without amendment of the General Plan.

- 8.30c Within developed portions of the Planning Area, enforce fire protection standards as adopted by the Oroville City Council.
- 8.30d Within rural and undeveloped portions of the Planning Area and in the urban-wildland interface, enforce fire protection standards as specified by the California Department of Forestry and Fire Protection (CDFFP), and the *Butte County Draft Energy, Natural Resources, and Recreation Element* (1989).

Residential area policies and development standards in the Butte County Draft Energy, Natural Resources, and Recreation Element (1989) include maintenance of a defensible space around residences, removal of vegetation from roofs, eaves, and gutters of residences, tree trimming, and spark arresters for chimneys or vents. Provision of a water storage supply, a well-pruned and watered landscape maintained in the 30-foot defensible space surrounding residences, roofing material restrictions, access requirements, and property identification measures would additionally ensure residential protection.

- 8.30e Monitor fire-flow capability of the water systems throughout the Planning Area, and support all efforts to improve water availability at all locations that have flows considered inadequate for fire protection.
- 8.30f Consider revision of the Fire Sprinkler Ordinance, if necessary, to provide protection in remote areas that cannot achieve adequate fire flows in the water systems.
- 8.30g Pursue the most effective and cost conservative methods of providing fire protection including the exploration of contract services with adjoining departments.

8.40 HAZARDOUS MATERIALS

The City's *Multi-Hazard Functional Disaster Plan* contains instructions for responding to a hazardous materials crisis. The cities of Oroville, Chico, Biggs, and Gridley, the Town of Paradise, and the County of Butte are all participants in a Joint Powers Agreement that form a Hazardous Materials Response Agency. A Hazardous Materials Response Team (HAZMAT Team) serves the member cities, and is comprised of 25 fire department personnel. The HAZMAT Team meets once a month for training and interaction with the Butte County Environmental Health Department, Oroville Paramedics, and other agencies expressing interest in the Team's operations.

The HAZMAT Team performs the following functions, as described in the Joint Powers Agreement:

- Size-up and initial assessment of an incident, determination of protective measures and additional resources;
- Rescue and first aid;
- Identification of hazardous materials;
- Recommendations for contacting specialized agencies;
- Fire extinguishment agents to be used, and application;
- Containment of hazardous material release;
- Advice on location of command post and staging area;
- Coordination with private sector;
- Provision of technical information to public information officer;
- Recommendations on needed training for response personnel; and
- Provision of cost information for recovery from responsible parties.

Oroville Solid Waste Disposal also operates a Household Hazardous Waste Facility on South Fifth Avenue where residents can drop off a wide variety of hazardous materials for proper disposal. Additional discussions of hazardous materials, as far as hazardous waste and hazardous waste recycling is considered, are included in Section 6.14.

Objective: Hazardous Materials

- 8.40a Protect residents and property from hazardous materials, by encouraging the recycling of hazardous waste, preventing accidents, and responding quickly in the event of an accident.

Implementing Policies: Hazardous Materials

- 8.40b Continue to participate in the Hazardous Materials Response Team authorized by the Joint Powers Agreement.

See also Policy 6.14b.

- 8.40c Rely on the *Multi-Hazard Functional Disaster Plan* in the event of a hazardous materials accident.

8.50 ELECTROMAGNETIC FIELDS

Electric and magnetic fields abound in nature, and emanate from the flow of electricity through everything from transmission lines to household appliances. After several years of analysis of dozens of studies exploring a possible connection between cancer and extremely low frequency (ELF) electromagnetic fields, the EPA has concluded that a growing body of data suggests a causal link. Although measurable, the intensity of electromagnetic fields is not related to any yet-established health standards, and effects on human tissue are subtle, complex, and poorly understood. Because the data suggests rather than proves a link between these fields and health risks, the EPA has not formally classified power-line electromagnetic fields as a potential carcinogen. However, some independent researchers state that cancer or other types of health risk may be associated with long-term residence close to high-voltage power lines and substations.

Transmission lines within the Planning Area range from very low voltages to those over 500 kilovolts, among the highest in California. (Transmission line corridors are shown on GP Figure 8-A.) PG&E adheres to California Public Utilities Commission General Order 95 for the construction of overhead transmission facilities and CAL OSHA standards for general construction activities. Right-of-way widths are determined by those requirements to ensure the safe construction, operation and maintenance of facilities in accordance with those standards.

The State Department of Education, School Facilities Planning Division has established limits for locating school sites near high voltage power transmission line easements.¹ These standards may require setbacks ranging from 100 feet from the edge of an easement for a 100 kilovolt line to a 350-foot setback for a 500-550 kilovolt line. For lines of greater than 550 kilovolts, the School Facilities Planning Division should be consulted for setbacks.

Objective: Electromagnetic Fields

- 8.50a Inform residents of electromagnetic fields generated by power transmission lines and other sources.

Implementing Policies: Electromagnetic Fields

- 8.50b Comply with the setback standards established by the State Department of Education, School Facilities Planning Division, when locating schools, child care facilities, and other non-residential uses where sensitive members of the population, such as children, are present for extended periods.

The State Department of Education's School Site Selection Guide (1993) specifies the following standards:

- 100 feet from edge of easement for 50-133 kv line;
- 150 feet from edge of easement for 220-230 kv line;
- 350 feet from edge of easement for 500-550 kv line.

Contact the School Facilities Planning Division for further information, or for setbacks for lines of greater than 550 kv. See also Policy 3.30i.

- 8.50c Support research on the health effects of electromagnetic fields generated by power transmission lines, substations, and other sources, and take additional appropriate action, if warranted, to reduce hazardous exposure.

If causal links are better established between high-voltage power lines or substations and health impacts, or if exposure is better correlated with occurrence of disease, it may become necessary to revise the setback standards specified in Policy 8.50b, or to specify new setback standards that are more appropriate. In addition to setbacks, studies may show that undergrounding certain lines may offer increased protection.

8.60 EMERGENCY MANAGEMENT

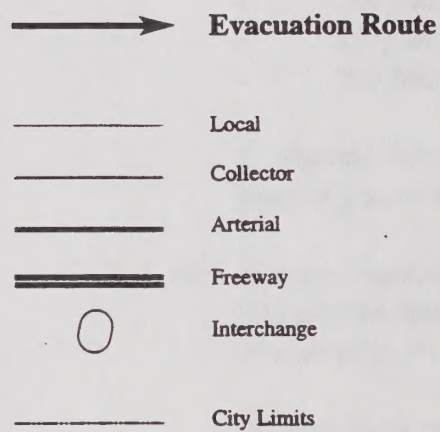
The City's Emergency Preparedness Plan, known as the Multi-Hazard Functional Disaster Plan, was comprehensively updated in 1988, and is undergoing ongoing revisions. The Plan defines the local, regional, State, and Federal responsibilities prior to, during, and after an emergency. Specific hazards covered include major earthquakes, hazardous materials incidents, imminent or actual flooding, imminent or actual dam failure, fire, civil disturbances, catastrophic storm events, major medical accidents, and war.

Of special importance to long-term planning is the identification and maintenance of Planning Area evacuation routes. Routes identified by the Oroville Fire Department are shown on GP Figure 8.60-A. These routes were selected to avoid, as much as possible, dependence on bridges or other structures that might be vulnerable to earthquakes and other natural disasters. Although it is not possible to show the specific routes that would be used in every disaster situation, it should be noted that provisions

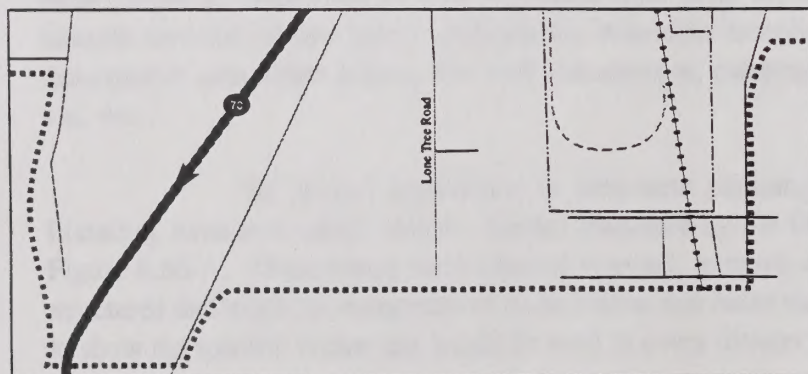
OROVILLE PLANNING AREA

Evacuation Routes

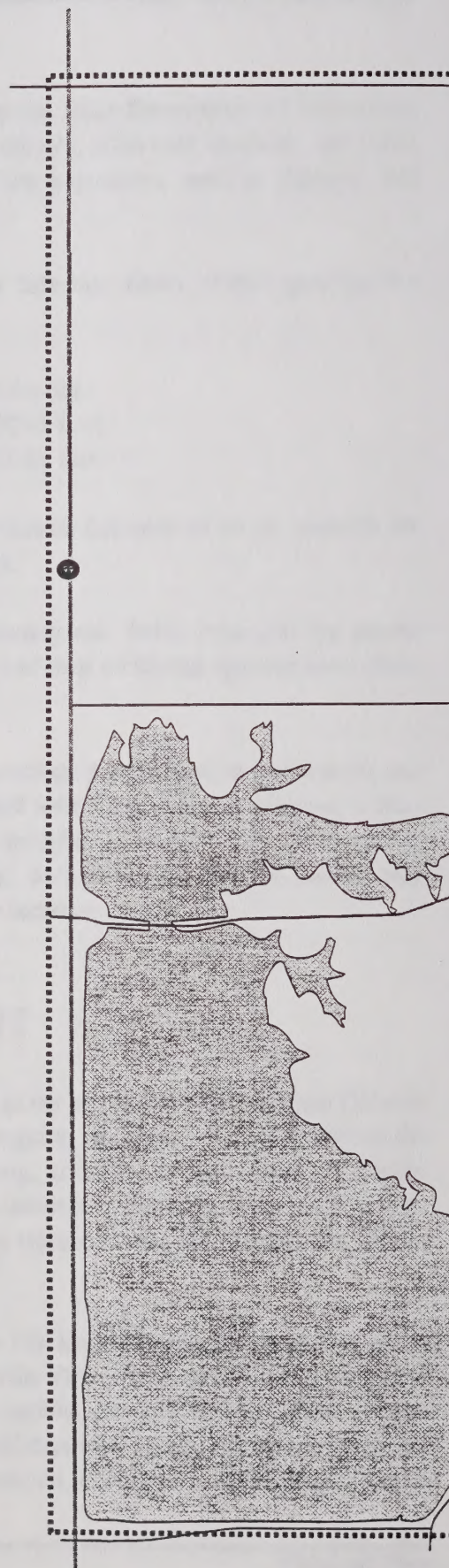
GP Figure 8.60-A



Source: Oroville Fire Department, 1992.



Southern extension of Planning Area



Evacuation Routes

GP Figure 8.60-A



will be made during any disaster to allow emergency vehicles access to and from Oroville Hospital and/or other emergency medical facilities.

Cooperative efforts. In the event of an emergency, the City would, to the extent possible, coordinate efforts with Butte County, surrounding jurisdictions, the State of California Office of Emergency Services, and Federal agencies. The American Red Cross provides assistance during natural disasters, operating independently of, but in cooperation with local government.

In addition to these agencies and the Oroville Fire Department (described in Section 8.30), law enforcement personnel would be involved in cooperative efforts to handle emergencies. Police protection within the Planning Area is provided primarily by the Oroville Police Department, serving incorporated areas, and the Butte County Sheriff's Department, serving unincorporated areas. Additional service is provided by the State Police, which serves all State-owned parkland; the California Highway Patrol, which provides traffic control for all State highways and roads; and the Department of Fish and Game, which monitors the enforcement of all laws relating to wildlife.

Police Department. Headquartered on Lincoln Street, the Oroville Police Department (OPD) has an authorized staff of 23 sworn officers, 11 non-sworn personnel and an average of 5 reserve officers. The OPD serves the 12.16 square miles of incorporated area, with no mutual aid agreement with the Butte County Sheriff's Department unless faced with a life-threatening situation. Average estimated response times within the City are two to three minutes and service is considered adequate to serve present needs. The OPD has recently hired new personnel in response to recent City growth, and the concerns of neighborhood improvement groups that have formed throughout the City. The OPD anticipates continued hiring in the future as funding becomes available to maintain an acceptable level for service for City residents as the community grows. No additional stations have been proposed.

Butte County Sheriff's Department. The Sheriff's Department provides police protection in unincorporated portions of the Planning Area. Although its headquarters are in Oroville, the County budget shortfall caused a reduction in the number of deputies on patrol and emergency response time has been slow. Future hiring as funding becomes available is anticipated to improve service.

Objectives: Emergency Management

- 8.60a Use the City of Oroville's *Multi-Hazard Functional Disaster Plan (MHFDP)* as the guide for disaster planning in the Oroville Planning Area; update the *MHFDP* to include both the incorporated and unincorporated portions of the Planning Area.
- 8.60b Aim for City-level self-sufficiency in emergency response, but coordinate with surrounding jurisdictions to the extent possible.

While multijurisdictional planning is an ideal, in the event of a region-wide disaster the emergency services of the County, State, and Federal agencies and of adjacent locales may be severely strained. Slippage on the Cleveland Hills fault, for example, could interrupt communication with outside emergency services, or cut off certain evacuation routes. Given the Planning Area's distance from other major urban centers, this type of severe disaster may require the City to handle the crisis in relative isolation.

Implementing Policies: Emergency Management

- 8.60c Revise the Multi-Hazard Functional Disaster Plan to provide continuing access to all emergency facilities.
- 8.60d Revise the Multi-Hazard Functional Disaster Plan to specifically recognize and address risks associated with tornadoes.
- 8.60e In conjunction with Policy 8.10g, include discussions regarding tornados within the City-based public awareness and preparedness program. This program will be intended to educate residents about the risk of tornados and other disasters, and what to do in the event of such a disaster.

Although generally uncommon to California, recent occurrences of tornadoes concentrated in the Oroville area have heightened the public's concern regarding future incidences. At least three tornadoes have touched down in the City within the last two years, resulting in extensive property damage. The frequency of tornado occurrences, as well as their potential destructiveness, warrant public awareness and preparedness similar to that for earthquakes, flooding, or other sources of disaster. In addition to revising the MHFDP, Policy 8.10g calls for a City-based public awareness and preparedness program which includes tornado awareness and education.

- 8.60f Establish community programs to train volunteers to assist police, fire, and civil defense personnel during and after a major earthquake, fire, flood, tornado, or other major disaster.

The City can encourage this training by publicizing courses available to the public in standard CPR and First Aid, as well as disaster-oriented training. The Multi-Hazard Functional Disaster Plan should specify locations to which volunteers can report during an emergency, and should include listings of appropriate jobs for volunteers.

ENDNOTES

1. California State Department of Education, *School Site Selection Guide*, Sacramento, 1993; School Facilities Planning Division, 1993.

9.0 NOISE ELEMENT

As mandated by State law, the Noise Element establishes objectives and implementing policies intended to limit community exposure to excessive noise levels. In order to accomplish this, this element provides a program for locating land uses which are compatible with surrounding environmental noise levels and for guiding the placement of new roads and transit facilities.

The Noise Element discusses the following:

- properties of noise
- noise impacts on humans
- major noise sources within the Planning Area
- existing and projected levels of noise
- the extent of noise problems within the community
- methods of noise attenuation

CONSISTENCY WITH STATE PLANNING LAW

Government Code Section 65302(f) requires that the noise element:

"shall analyze and quantify, to the extent practicable, ... current and projected noise levels for all of the following sources:

- highways and freeways
- primary arterials and major local streets
- passenger and freight on-line railroad operations and ground rapid transit systems
- commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation
- local industrial plants, including, but not limited to, railroad classification yards
- other ground stationary noise sources identified by local agencies as contributing to the community noise environment"

Each of the above issues have been addressed and this element has been prepared consistent with State planning laws regulating the preparation of a noise element.

PROPERTIES OF NOISE AND IMPACTS ON HUMANS

Noise has been defined as unwanted sound and it is known to have several adverse effects on people. From those known effects of noise, criteria have been established to help protect the public health and safety and prevent disruption of certain human activities. This criteria is based on such known effects of noise on people as hearing loss (not generally a factor with community noise), communication

interference, sleep interference, physiological responses and annoyance. Each of these potential noise impacts are briefly discussed in the following narratives.

Hearing loss. Hearing loss is not, in general, a concern in community noise problems. The potential for noise-induced hearing loss is more commonly associated with occupational noise exposures in heavy industry or very noisy work environments with long-term exposure. The Occupational Safety and Health Administration (OSHA) identifies a noise exposure limit of 90 dB¹ for 8 hours per day to protect from hearing loss. Noise levels in most neighborhoods, even in very noisy airport environments near major international airports, is not sufficiently loud to cause hearing loss.

Communication interference. Communication interference is one of the primary concerns in environmental noise problems, and includes speech interference and interference of activities such as watching television. Normal conversational speech is in the range of 60 to 65 dB and any noise in this range or louder may interfere with speech.

Sleep interference. Sleep interference is a major noise concern in noise assessment and, of course, is most critical during nighttime hours. Sleep disturbance is one of the major causes of annoyance due to community noise. Noise can make it difficult to fall asleep, create momentary disturbances of natural sleep patterns by causing shifts from deep to lighter stages and cause awakening.

Extensive research has been conducted on the effect of noise on sleep disturbance. Recommended values for desired sound levels in residential bedroom space range from 25 to 45 dB with 35 to 40 dB being the norm. The National Association of Noise Control Officials have published data on the probability of sleep disturbance with various single event noise levels. Based on experimental sleep data as related to noise exposure, a 75 dB interior noise level event will cause noise-induced awakening in 30 percent of cases.

Physiological responses. Physiological responses are those measurable effects of noise on people which are realized as changes in pulse rate, blood pressure, etc. While such effects can be induced and observed, the extent is not known to which these physiological responses cause harm or are signs of harm. Generally, physiological responses are a reaction to a loud, short-term noise such as a rifle shot or a very loud jet overflight.

Annoyance. Annoyance is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing capability. The level of annoyance, of course, depends on the characteristics of the noise (i.e., loudness, frequency, time, and duration), and how much activity interference (e.g., speech interference and sleep interference) results from the noise. However, the level of annoyance is also a function of the attitude of the receiver. Personal sensitivity to noise varies widely. It has been estimated that two to ten percent of the population is highly susceptible

to noise not of their own making, while approximately 20 percent are unaffected by noise. Attitudes are affected by the relationship between the person and the noise source. (Is it our dog or the neighbor's?) Whether we believe that someone is trying to abate the noise will also affect our level of annoyance.

MAJOR PLANNING AREA NOISE SOURCES, SENSITIVE LAND USES, AND NOISE COMPLAINTS

The predominant noise sources in the Planning Area are highway (Highway 70, Highway 99, and State Route 162) and arterial noise, train noise from the Union Pacific Railroad, noise associated with industrial plants, and aircraft noise from the Oroville Municipal Airport. Construction noise is also present on an intermittent basis. A "noise contour map" shows as closed lines those bands subject to the same average noise levels, much as a topographic map shows as closed contours those linear bands of similar elevation. GP Figure 9-A and GP Figure 9-B reflect noise levels generated by traffic, the airport and the railroad.

Land uses identified in Oroville as noise-sensitive include residences of all types, the Oroville Hospital and related medical uses, nursing homes and care centers, convalescent hospitals, churches, and schools.

According to the Planning and Building Department's, the City has received at least one written and several verbal noise related complaints from residents located within an industrially zoned area near an existing moulding company. In addition to these residents, surrounding business owners operating in close proximity to the same moulding company have filed verbal complaints. Each of these complaints were brought before the City Council for discussion on numerous occasions.

City Staff has repeatedly monitored noise levels in this area throughout the past several years, and has worked extensively with moulding company representatives to implement a variety of measures designed to reduce the amount of noise generated from the plant and equipment operations. Noise exposure levels between the existing moulding company and surrounding industrial uses have also been reduced substantially over the last two years. Continuing efforts are intended to decrease these levels even more in the future.

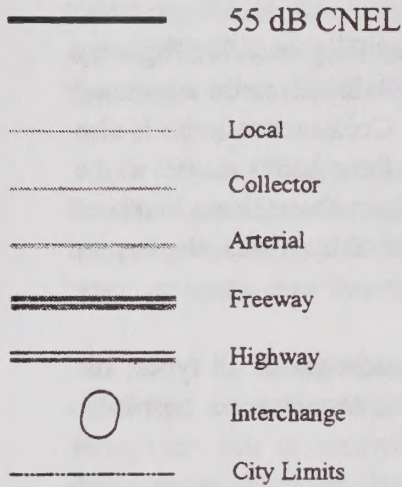
THE 1994 COMMUNITY NOISE SURVEY

In July, 1994 a noise survey was conducted by Brown-Buntin Associates (BBA) in association with the General Plan update, to identify and evaluate existing noise sources within the Planning Area and the related impacts on the community. Noise level measurements and predictions were prepared for Highways 70 and 99, major arterials, six industrial facilities, and railroad line operations. Noise level contours were subsequently prepared based upon this data. A community noise survey was also conducted to evaluate existing ambient noise levels in areas of the City removed from noise sources identified by the above noise study.

OROVILLE PLANNING AREA

Existing Noise

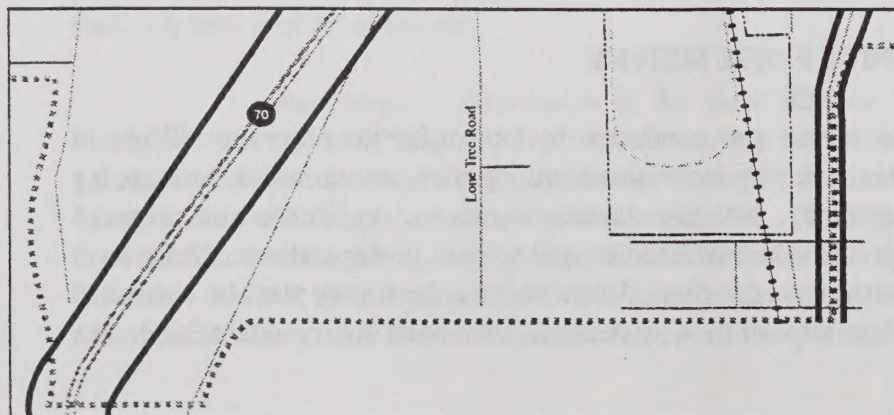
GP Figure 9-A



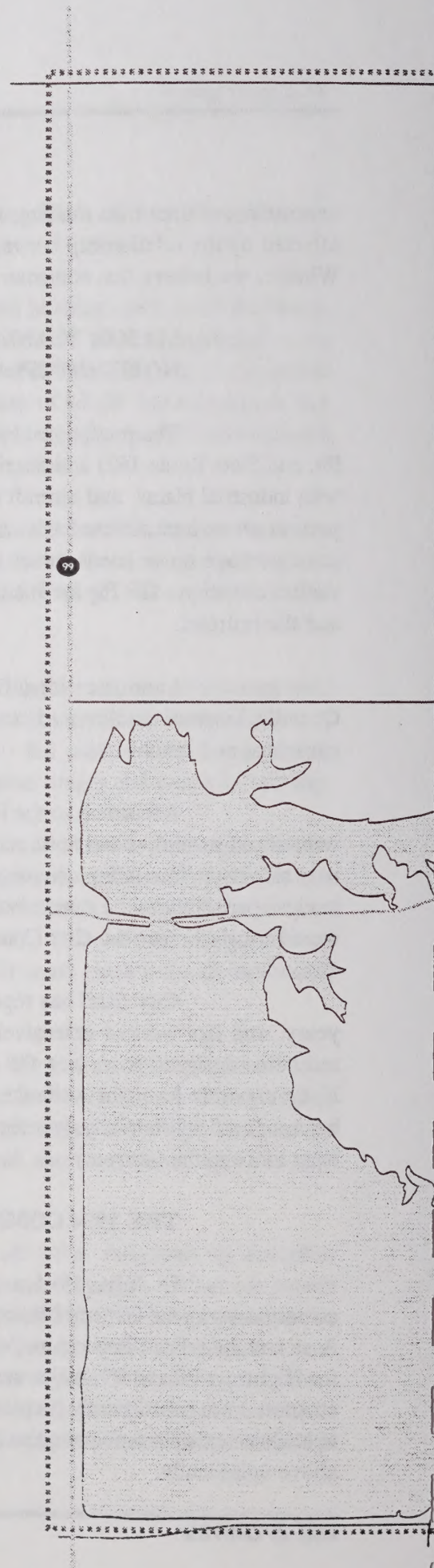
Notes: Data for railroad south of Oroville Dam Boulevard East not available. Noise contours that terminate abruptly reflect an absence of available noise measurements.

This figure reflects existing traffic, railroad and airport noise. Contours do not reflect attenuation offered by shielding.

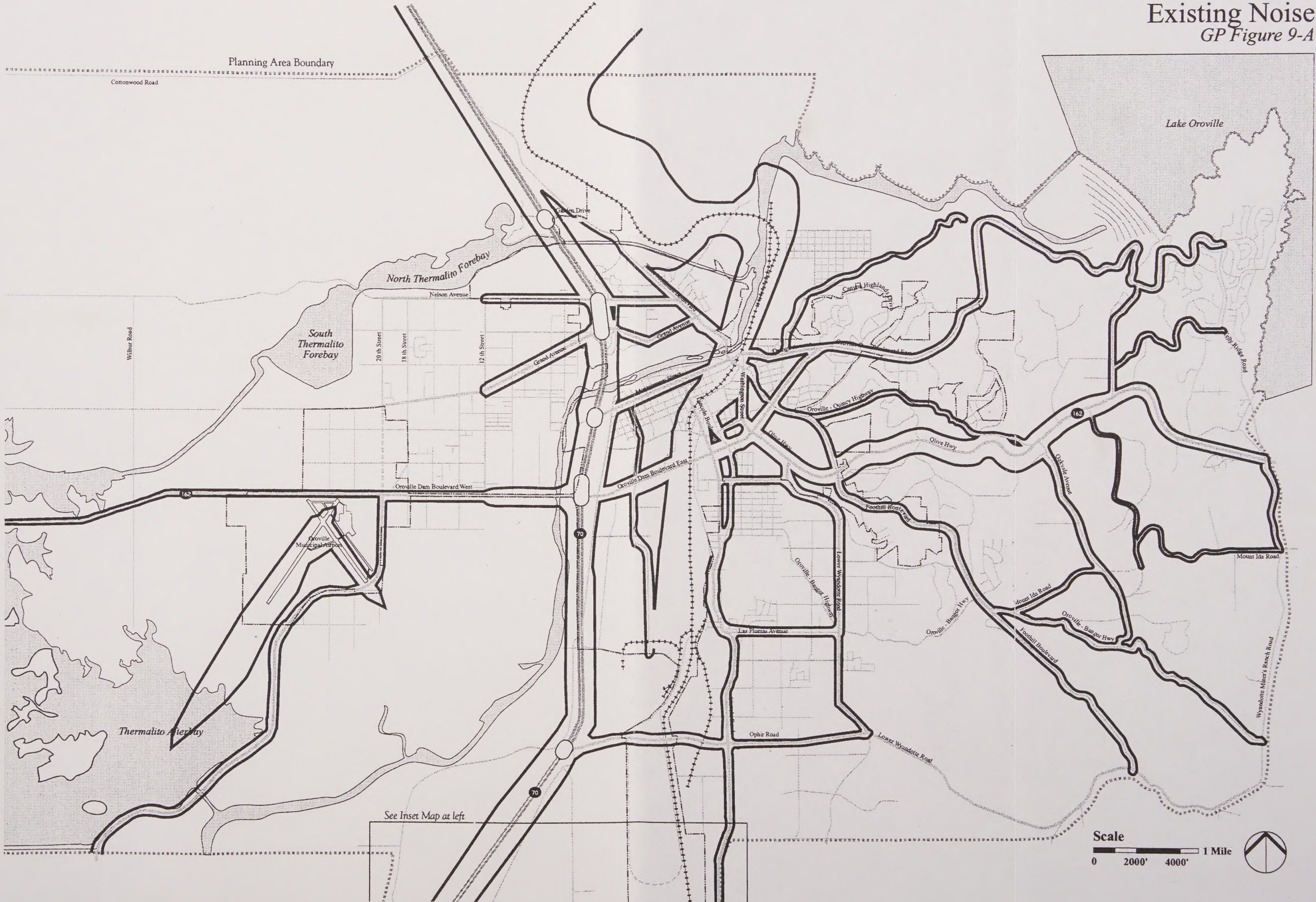
Sources: Blayne Dyett Greenberg 1992; Brown-Buntin Associates, Inc., 1990; Butte County Noise Element, 1977.



Southern extension of Planning Area



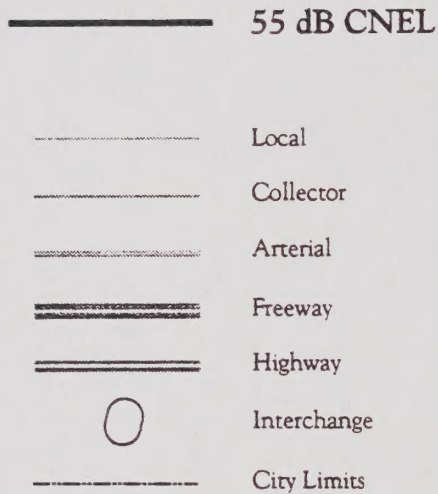
Existing Noise
GP Figure 9-A



OROVILLE PLANNING AREA

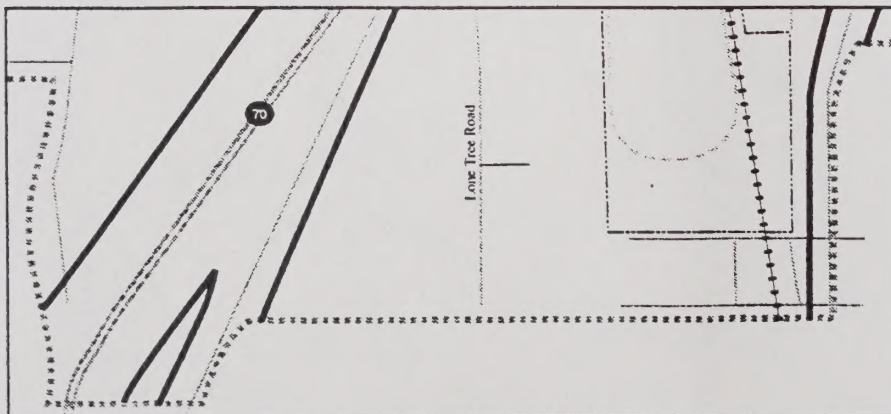
Future Noise

GP Figure 9-B

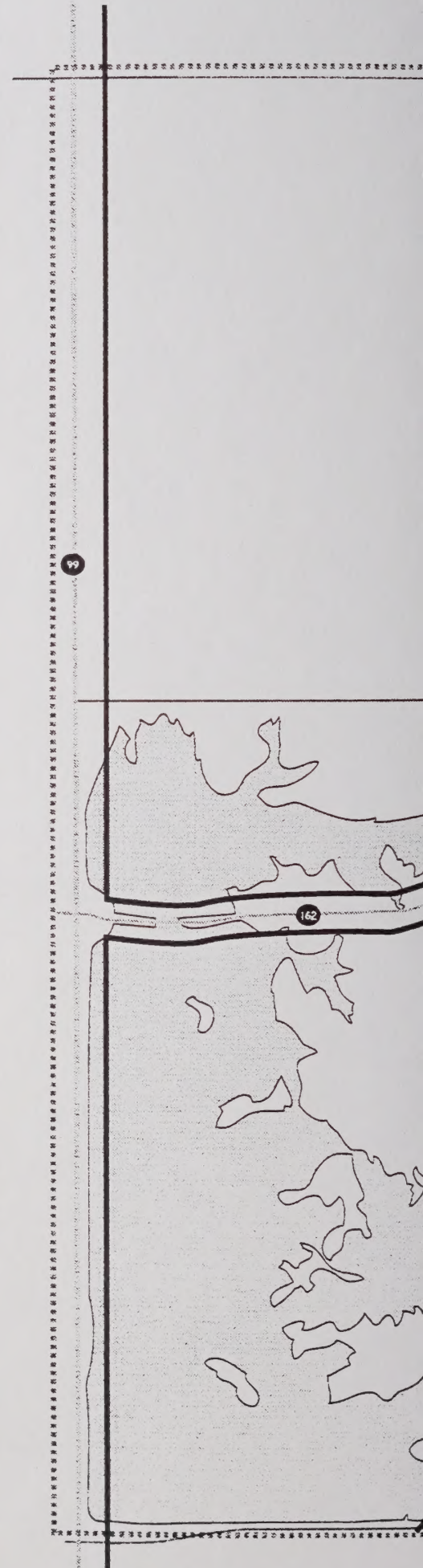


Notes: Data for railroad south of Oroville Dam Blvd. East not available. Noise contours that terminate abruptly reflect an absence of available noise measurements. This figure reflects future traffic, railroad and airport noise at General Plan buildout, 2010. Contours do not reflect attenuation offered by shielding.

Sources: Blayney Dyett Greenberg 1992; Brown-Buntin Associates, Inc., 1990; Butte County Noise Element, 1977.



Southern extension of Planning Area



Future Noise
GP Figure 9-B



Roadways. Traffic noise levels as defined by L_{dn} were calculated for existing traffic volumes for major roadways and State Routes 70 and 162. Distances from the centerlines of selected roadways to the 60 and 65 dB L_{dn} contours are summarized in Table 9-A. Traffic data representing annual average traffic volumes for existing conditions were obtained from Caltrans and the project traffic consultants. Day/night traffic distribution for State Routes 70 and 162 were based upon 24-hour noise measurement data, and day/night traffic distribution for other major roadways was based upon Caltrans and BBA data. Truck mix data were based upon Caltrans and BBA file data.

TABLE 9-A
Distance to the Existing L_{dn} Contours

Roadway/ Segment No.	From/To	Distance in feet from centerline to L_{dn} Contour	
		60 dB	65 dB
S.R. 99:			
1	Cottonwood to Oroville Dam	224	104
2	Oroville Dam to S. Plan Boundary	228	106
S.R. 70:			
3	Cottonwood to Nelson	442	205
4	Nelson to Grand	347	161
5	Grand to Montgomery	510	237
6	Montgomery to Oroville Dam	425	197
7	Oroville Dam to Proposed East/West Arterial	412	191
8	Proposed East/West Arterial to S. Plan Boundary	---	---
4th Street Access to S.R. 70:			
9	Nelson to Grand	38	18
3rd Street Access to S.R. 70:			
10	Nelson to Grand	39	18
Feather River:			
11	Montgomery to Mitchell	69	32
12	Mitchell to Oroville Dam	69	32
13	Oroville Dam to Proposed East/West Arterial	44	20
14	Proposed East/West Arterial to S. Plan Boundary	49	23

TABLE 9-A
Distance to the Existing L_{dn} Contours

Roadway/ Segment No.	From/To	Distance in feet from centerline to L _{dn} Contour	
		60 dB	65 dB
5th Avenue:			
15	Montgomery to Mitchell	20	9
16	Mitchell to Wyandotte	39	18
17	Wyandotte to Cal-Oak	46	21
18	Cal-Oak to S. Plan Boundary	33	15
Lincoln Boulevard:			
19	Montgomery to Huntoon	13	6
20	Huntoon to Oroville Dam	23	11
21	Oroville Dam to Wyandotte	132	61
22	Wyandotte to Myers	95	44
23	Myers to Las Plumas	126	59
24	Las Plumas to Ophir	80	37
25	Ophir to S. Plan Boundary	67	31
Myers Street:			
26	Montgomery to Baldwin	61	28
27	Baldwin to Mitchell	57	27
28	Mitchell to Oroville Dam	72	33
29	Oroville Dam to Wyandotte	42	20
30	Wyandotte to Oroville Bangor	68	31
31	Oroville Bangor to Lincoln	29	14
Washington Avenue:			
32	Montgomery to Oroville Dam	114	53
Long Bar Road:			
33	N. Plan Boundary to Canyon Highlands	45	21
34	Canyon Highlands to Orange	85	39
Lower Wyandotte:			
35	Olive Highway to Clairmont	100	46
36	Clairmont to Las Plumas	88	41
37	Las Plumas to Ophir	35	16

TABLE 9-A
Distance to the Existing L_{dn} Contours

Roadway/ Segment No.	From/To	Distance in feet from centerline to L _{dn} Contour	
		60 dB	65 dB
Foothill Boulevard:			
38	Oroville Quincy Highway to Olive Highway	32	15
39	Olive Highway to E. Plan Boundary	80	37
Table Mountain Boulevard:			
40	Center to Nelson	51	24
41	Nelson to Grand	95	44
42	Grand to Montgomery	133	62
Nelson Avenue:			
43	12th to S.R. 70	69	32
44	S.R. 70 to Table Mountain	90	42
Grand Avenue:			
45	12th to S.R. 70	101	47
46	S.R. 70 to Fogg	68	32
47	Fogg to Table Mountain	72	34
Montgomery Avenue:			
48	S.R. 70 to Feather River	80	37
49	Feather River to 5th	45	21
50	5th to Lincoln	53	24
51	Lincoln to Myers	49	23
52	Myers to Orange	56	26
Mitchell Avenue:			
53	Feather River to 5th	19	9
54	5th to Myers	25	11
55	Myers to Washington	11	5

TABLE 9-A
Distance to the Existing L_{dn} Contours

Roadway/ Segment No.	From/To	Distance in feet from centerline to L _{dn} Contour	
		60 dB	65 dB
Oroville Dam Boulevard (S.R. 162):			
56	S.R. 99 to 18th	77	36
57	18th to 12th	146	68
58	12th to S.R. 70	221	103
59	S.R. 70 5th	230	107
60	5th to Lincoln	377	175
61	Lincoln to Olive Highway	272	126
62	Olive Highway to Orange	168	78
63	Orange to Canyon Highlands	147	68
64	Canyon Highlands to Powerhouse	140	65
65	Powerhouse to Canyon	63	29
Hillcrest Avenue:			
66	Canyon to Kelly Ridge	35	16
Royal Oaks Drive:			
67	Canyon to Kelly Ridge	63	29
Canyon Drive:			
68	Oroville Dam to Olive Highway	59	27
Miners Ranch Road:			
69	Olive Highway to Mount Ida	57	26
Las Plumas Avenue:			
70	Lincoln to Lower Wyandotte	80	37
Ophir Road:			
71	S.R. 70 to Lincoln	85	39
72	Lincoln to Lower Wyandotte	19	

TABLE 9-A
Distance to the Existing L_{dn} Contours

Roadway/ Segment No.	From/To	Distance in feet from centerline to L _{dn} Contour	
		60 dB	65 dB
Mt. Ida Road:			
73	Lower Wyandotte to Foothill	70	33
74	Foothill to La Mirada	16	7
75	La Mirada to Miners Ranch	25	12
Upper Palermo Road:			
76	Ophir to S. Plan Boundary	42	19
Oakvale Avenue:			
77	Olive Highway to Mt. Ida	72	33
78	Mt. Ida to Oroville Bangor Highway	69	32
La Mirada Avenue:			
79	Olive Highway to Wahoo	30	14
80	Wahoo to Mt. Ida	12	5
Baldwin Avenue:			
81	Myers to Washington	31	14
82	Washington to Oroville Quincy Highway	23	10
Wyandotte Avenue:			
83	S.R. 70 to 5th	---	---
84	5th to Lincoln	---	---
85	Lincoln to Myers	64	30
86	Myers to Lower Wyandotte	35	16
87	Lower Wyandotte to Foothill	---	---
Oroville Bangor Highway:			
88	Lower Wyandotte to Foothill	72	33
89	Oakvale to Miners Ranch	77	36

TABLE 9-A
Distance to the Existing L_{dn} Contours

Roadway/ Segment No.	From/To	Distance in feet from centerline to L _{dn} Contour	
		60 dB	65 dB
Orange Avenue:			
90	Washington to Oroville Quincy Highway	26	12
91	Oroville Quincy Highway to Oroville Dam	62	29
Oroville Quincy Highway:			
92	Orange to Baldwin	28	13
93	Baldwin to Oroville Dam	44	20
94	Oroville Dam to Foothill	67	31
95	Foothill to Arbol	58	27
96	Glen to Olive Highway	38	17
Olive Highway (S.R. 162):			
97	Oroville Dam to Proposed East/West Arterial	244	113
98	Proposed East/West Arterial to Foothill	---	---
99	Foothill to Oakvale	336	156
100	Oakvale to La Mirada	226	105
101	La Mirada to Canyon	204	95
102	Canyon to Kelly Ridge	143	67
Foothill Boulevard:			
103	Oroville Quincy Highway to Olive Highway	32	15
104	Olive Highway to Oroville Bangor Highway	80	37
105	Oroville Bangor Highway to Mt. Ida	88	41
Larkin Road:			
106	Oroville Dam to SW Airport Corner	61	28

In some cases, the actual distances to noise level contours may vary from the distances predicted by the FHWA model. Factors such as roadway curvature, roadway grade, shielding from local topography or structures, elevated roadways, or elevated receivers may affect actual sound propagation. Therefore the distances reported in Table 9-A are estimates of noise exposure along roadways in the Planning Area.

Table 9-B was prepared to serve as a guide when applying the traffic noise exposure contour information presented in this section to areas with varying topography. The table is used by adding the correction factor to the noise level predicted at a given distance. It should be noted that the adjustment factors presented in this table are intended to provide conservative (worst-case) results, and that complex situations should be evaluated by an acoustical consultant where the potential for significant noise impact exists.

TABLE 9-B
TRAFFIC NOISE ADJUSTMENTS FOR VARIOUS TOPOGRAPHIC CONDITIONS

Topographic Situation	Distance from Center of Roadway (Feet)		
	< 200	200 - 400	> 400
Hillside overlooks roadway	-0-	+1 dB	+3 dB
Roadway Elevated (> 15')	-5 dB	-2 dB	-0-
Roadway in cut/below embankment	-5 dB	-5 dB	-5 dB
Dense vegetation (100 feet or more)	-5 dB	-5 dB	-5 dB

Railroads. Railroad activity in the City of Oroville Planning Area includes freight activity on the Union Pacific Railroad (UPRR) track which travels north/south through the City of Oroville.

Noise measurements were conducted within the Planning Area to determine the contribution of UPRR railroad operations to the area noise environment. The monitoring site was located approximately 75 feet from the centerlines of the tracks, at the Sprint Telephone building on Bird Street.

At the measurement site, locomotives and warning horns were the major contributors to railroad noise levels defined by SEL. Based upon the noise level measurements, the average sound exposure level (SEL) for freight train operations along the UPRR railroad track was 100.8 dB at a distance of 75 feet from railroad track centerline.

UPRR officials from the Sacramento Government Affairs Office report that approximately 12 to 14 freight train operations per day occur on the mainline through Oroville. The trains are distributed on a random basis throughout the day. The noise level measurement data indicated that during the 24-hour survey period, 12 freight train operations occurred, thus confirming the reported number of freight train operations. For the purposes of this analysis, 14 freight train operations were assumed.

Table 9-C shows the L_{dn} values for railroad line operation and the distance to the 60 and 65 dB L_{dn} noise level contours.

TABLE 9-C
APPROXIMATE DISTANCE TO RAILROAD NOISE CONTOURS

Train Track	L_{dn} , dB, 75 Feet From Tracks	Distance to L_{dn} Contour (feet)	
		60 dB	65 dB
UPRR	69.3	315	145

Fixed Noise Sources. The production of noise is a result of many industrial processes. Noise exposures within industrial facilities are controlled by Federal and State employee health and safety regulations (OSHA and Cal-OSHA), but exterior noise levels may exceed locally acceptable standards. Commercial, recreational and public service facility activities can also produce noise which affects adjacent sensitive land uses. These noise sources can be continuous and may contain tonal components which may be annoying to individuals who live in the nearby vicinity. In addition, noise generation from fixed noise sources may vary based upon climatic conditions, time of day and existing ambient noise levels.

From a land use planning perspective, fixed-source noise control issues focus upon two goals: to prevent the introduction of new noise-producing uses in noise-sensitive areas, and to prevent encroachment of noise sensitive uses upon existing noise-producing facilities. The first goal can be achieved by applying noise performance standards to proposed new noise-producing uses. The second goal can be met by requiring that new noise-sensitive uses in proximity to noise-producing facilities include mitigation measures to ensure compliance with noise performance standards.

Fixed noise sources which are typically of concern include, but are not limited to, the following:

HVAC Systems
Lift Stations
Pump Stations

Hammer Hogs
Dust Collection Systems
Cooling Towers/Evaporative Condensers

Emergency Generators
Steam Valves
Generators
Air Compressors
Conveyor Systems
Pile Drivers
Drill Rigs
Welders
Outdoor Speakers

Boilers
Steam Turbines
Fans
Heavy Equipment
Transformers
Grinders
Gas or Diesel Motors
Cutting Equipment
Blowers

The types of uses which may typically produce the noise sources described above include but are not limited to: saw mills, wood fabricating shops, industrial facilities, trucking operations, tire shops, auto maintenance shops, metal fabricating shops, shopping centers, drive-up windows, car washes, loading docks, public works projects, batch plants, bottling and canning plants, recycling centers, electric generating stations, race tracks, landfills, sand and gravel operations, aggregate plants and athletic fields.

Numerous industrial facilities are dispersed throughout the Planning Area. Based upon discussions with the City of Oroville Planning, Building and Public Works Department staff, the following industrial facilities were identified to represent existing fixed noise sources in the Planning Area. The following information is intended to be representative of the noise sources and noise levels associated with such uses.

Pacific Laminating, Inc.
2805 Richter Ave.

The major noise sources associated with the operation include the dust collection vacuum system located on the west side of the plant, and the "hammer hog" which is located inside of the building. Other sources include on-site fork lift operations and conveyor belts. At a distance of 50 feet west of the vacuum, the average noise level was 80 dB L_{eq} . Noise levels to the east of the site were 74 dB L_{eq} , at a distance of 25 feet from the conveyor and hammer-hog enclosure. Each of the noise sources are very directional in nature, and benefit from shielding due to nearby building facades and topography.

Based upon shielding from buildings and topography, it is difficult to determine the distances to the 50 dB L_{eq} contour. However, without the benefit of shielding, the worst case distances to the 50 dB L_{eq} contours could be up to 1,700 feet to the west of the site, and 400 feet to the east of the site.

Robinson Construction Co. Inc.
4714 Pacific Heights Rd.

Major noise sources include truck traffic, aggregate screens, rock crushers, loaders and the asphalt plant. Worst case noise levels occur when the rock crushers are in operation. The measured noise level at the property line, and at a distance of approximately 800 feet south of the crusher was 56 dB L_{eq} . The nearest residential uses are located south of Robinson Construction. The distance to the 50 dB L_{eq} noise level contour is approximately 1,600 feet from the crusher and 800 feet from the south property line.

Louisiana-Pacific Corporation
Merlo Lane

Major noise sources associated with the hardboard plant include saws/presses, compressors, dust collection vacuums, sanders, a boiler, and truck traffic to and from the site. The lumbermill is currently inoperative. Measured noise levels at the north property line were 69 dB L_{eq} , and 78 dB L_{max} . Measured noise levels at a distance of approximately 500 feet south of the hardboard plant, near the log deck, were 55 dB L_{eq} . Distances to the 50 dB L_{eq} contours, are approximately 3,000 feet to the north of the hardboard plant, and approximately 900 feet to the south of the hardboard plant.

Setzer Forest Products
1980 Kusel Road

Major noise sources associated with the operation include a hammer-hog, moulding machines, rip saws, chop saws, dust collection vacuums and truck traffic to and from the site. The measured noise levels were 62.5 dB L_{eq} at the east property line, 73 dB L_{eq} at a distance of 150 feet west of the building, and 66 dB L_{eq} at a distance of 200 feet to the south of the building. Distances to the 50 dB L_{eq} contours are approximately 210 feet east of the plant, 1,050 feet west of the plant, and 1,250 south of the plant.

Pacific Coast Producers
1601 Mitchell Avenue

The major noise source associated with this operation is truck traffic to and from the site, processing equipment located outside of the plant, and roof-top ventilation equipment. During the tomato season, there are approximately 75 to 80 trucks per day at the site. Pacific Coast Producers is located within the City limits, and has residential uses to the north and adjacent to the site. The noise level measurements indicated that at the nearest residence average hourly noise levels from all activities were 73 dB L_{eq} . Steady-state noise levels due solely to roof-top air handling equipment was 70.5 dB at the nearest residence, and the maximum measured noise levels were in

excess of 90 dB. The worst case noise levels due to operations associated with Pacific Coast Producers occur to the north of the site, and the distance to the 50 dB L_{eq} contour is expected to range between 1,000 and 1,400 feet from the plant. The distances to the 50 dB L_{eq} contours to the south, east and west of the site is estimated to be 1,000 feet from the plant.

Airport Noise. The Oroville Airport is located west of Larkin Road within the City limits. Aircraft operations at the airport are audible in the Planning Area, and existing and future operations are identified as a potential noise source within the study area.

The Oroville Airport is a general aviation public use airport, which is owned and operated by the City of Oroville. The airport has two runways with headings of 12/30 and 01/19. Based upon The California Aviation System Plan, published by the California Department of Transportation, Aeronautics Division in August 1990, there were approximately 41 total based aircraft at the airport, with a total of 37,000 annual operations.

Community Noise Survey. A community noise survey was conducted to document noise exposure in areas of the Planning Area containing noise sensitive land uses. Noise sensitive land uses were considered to include residential areas, parks and schools. Noise monitoring sites were selected to be representative of typical residential conditions in the City.

Short-term noise monitoring was conducted at seven sites. Each site was monitored three different times during the day and night in order to prepare valid estimates of L_{dn} . Two continuous 24-hour noise monitoring sites were established in the Planning Area as part of the General Plan Update to record day-night statistical noise level trends. The data collected included the L_{eq} and other statistical descriptors. Noise monitoring sites, measured noise levels, and estimated L_{dn} values at each site are summarized in Table 9-D.

The community noise survey results indicate that typical noise levels in noise-sensitive areas of the Planning Area are in the range of 46 dB to 59 dB L_{dn} . Traffic on local roadways and State Route 70, aircraft operations, distant industrial activities and neighborhood activities are the controlling factors for background noise levels in the majority of the study area. In general, most areas of the City of Oroville which contain noise-sensitive uses are moderately quiet to noisy, and are representative of an urban environment. In comparing the recent community noise level measurements to those which were conducted in 1982 for the current General Plan, it appears that background noise levels away from major noise sources such as State Route 99 have increased in small and moderate amounts.

TABLE 9-D
SUMMARY OF MEASURED NOISE LEVELS AND ESTIMATED DAY-NIGHT
AVERAGE LEVELS (L_{dn})

Site	Location	Date	Time	Sound Level, dB		
				L_{eq}	L_{max}	Est. L_{dn}
1	Martin Luther King Park	7/13/94	12:20	50.1	61.5	59
		7/13/94	22:36	53.0	63.8	
		7/14/94	10:20	55.0	63.0	
2	Lincoln & Robinson Streets	7/13/94	12:55	53.9	62.0	55
		7/13/94	22:55	46.3	47.5	
		7/14/94	11:00	55.0	67.0	
3	East Grand Avenue	7/13/94	13:20	36.1	47.8	47
		7/13/93	23:10	41.1	42.5	
		7/14/94	8:55	38.0	51.0	
4	12th Street & Plumas Avenue	7/13/94	13:55	52.1	70.2	51
		7/13/94	23:20	41.5	50.8	
		7/14/94	8:30	47.2	66.8	
5	Edgewood Drive and Foothill Blvd.	7/13/94	12:00	43.1	53.4	50
		7/13/94	22:25	43.7	46.0	
		7/14/94	10:00	42.0	58.0	
6	Kelly Ridge Golf Course	7/13/94	15:00	52.1	67.5	51
		7/13/94	22:10	40.9	48.0	
		7/14/94	9:25	50.0	63.0	
7	Crest Ridge Drive	7/13/94	14:30	43.7	54.7	46
		7/13/94	22:50	39.6	43.3	
		7/14/94	10:40	36.0	54.0	
A*	2 Sabine Road	7/13/94	--	--	--	52.1
		- 7/14/94				
B*	2604 Oroville Dam West	7/13/94	--	--	--	50.6
		- 7/14/94				
* = Continuous Monitoring Site						

FUTURE TRAFFIC NOISE LEVELS

Traffic is identified above as one of the dominant existing noise sources. Implementation of the General Plan is expected to add to existing traffic noise levels. Tables 9-E and 9-F, below, summarize projected noise contours and traffic noise levels, occurring after Plan implementation.

Table 9-E summarizes the projected distances from the centerlines of selected major roadways and State Routes 70 and 99 to the 60 and 65 dB L_{dn} contours. These distances can be compared on an individual roadway basis. In general, given the anticipated increases in traffic volumes, the future locations of the 60 and 65 dB L_{dn} contours are expected to affect additional noise sensitive uses, as compared to existing conditions.

TABLE 9-E
DISTANCE TO THE FUTURE L_{dn} CONTOURS

Roadway/ Segment No.	From/To	Distance in feet from Centerline to L _{dn} Contour	
		60 dB	65 dB
S.R. 99:			
1	Cottonwood to Oroville Dam	391	182
2	Oroville Dam to S. Plan Boundary	446	207
S.R. 70:			
3	Cottonwood to Nelson	907	421
4	Nelson to Grand	816	379
5	Grand to Montgomery	1024	475
6	Montgomery to Oroville Dam	938	435
7	Oroville Dam to Proposed East/West Arterial	753	350
8	Proposed East/West Arterial to S. Plan Boundary	878	408
4th Street Access to S.R. 70:			
9	Nelson to Grand	61	28
3rd Street Access to S.R. 70:			
10	Nelson to Grand	68	32

TABLE 9-E
DISTANCE TO THE FUTURE L_{DN} CONTOURS

Roadway/ Segment No.	From/To	Distance in feet from Centerline to L _{dn} Contour	
		60 dB	65 dB
Feather River:			
11	Montgomery to Mitchell	104	48
12	Mitchell to Oroville Dam	138	64
13	Oroville Dam to Proposed East/West Arterial	102	47
14	Proposed East/West Arterialto S. Plan Boundary	170	79
5th Avenue:			
15	Montgomery to Mitchell	56	26
16	Mitchell to Wyandotte	90	42
17	Wyandotte to Cal-Oak	80	37
18	Cal-Oak to S. Plan Boundary	58	27
Lincoln Boulevard:			
19	Montgomery to Huntoon	37	17
20	Huntoon to Oroville Dam	71	33
21	Oroville Dam to Wyandotte	90	42
22	Wyandotte to Myers	143	66
23	Myers to Las Plumas	205	95
24	Las Plumas to Ophir	114	53
25	Ophir to S. Plan Boundary	104	48
Myers Street:			
26	Montgomery to Baldwin	65	30
27	Baldwin to Mitchell	79	37
28	Mitchell to Oroville Dam	115	53
29	Oroville Dam to Wyandotte	75	35
30	Wyandotte to Oroville Bangor	94	44
31	Oroville Bangor to Lincoln	65	30

TABLE 9-E
DISTANCE TO THE FUTURE L_{DN} CONTOURS

Roadway/ Segment No.	From/To	Distance in feet from Centerline to L _{dn} Contour	
		60 dB	65 dB
Washington Avenue:			
32	Montgomery to Oroville Dam	140	65
Long Bar Road:			
33	N. Plan Boundary to Canyon Highlands	58	27
34	Canyon Highlands to Orange	104	48
Lower Wyandotte:			
35	Olive Highway to Clairmont	135	63
36	Clairmont to Las Plumas	129	60
37	Las Plumas to Ophir	91	42
Foothill Boulevard:			
38	Oroville Quincy Highway to Olive Highway	69	32
39	Olive Highway to E. Plan Boundary	150	70
Table Mountain Boulevard:			
40	Center to Nelson	106	49
41	Nelson to Grand	135	63
42	Grand to Montgomery	191	89
Nelson Avenue:			
43	12th to S.R. 70	122	57
44	S.R. 70 to Table Mountain	105	49

TABLE 9-E
DISTANCE TO THE FUTURE L_{DN} CONTOURS

Roadway/ Segment No.	From/To	Distance in feet from Centerline to L _{dn} Contour	
		60 dB	65 dB
Grand Avenue:			
45	12th to S.R. 70	155	72
46	S.R. 70 to Fogg	124	57
47	Fogg to Table Mountain	115	53
Montgomery Avenue:			
48	S.R. 70 to Feather River	92	43
49	Feather River to 5th	48	22
50	5th to Lincoln	56	26
51	Lincoln to Myers	46	21
52	Myers to Orange	65	30
Mitchell Avenue:			
53	Feather River to 5th	47	22
54	5th to Myers	68	32
55	Myers to Washington	50	23
Oroville Dam Boulevard:			
56	S.R. 99 to 18th	223	103
57	18th to 12th	381	177
58	12th to S.R. 70	471	219
59	S.R. 70 to 5th	270	125
60	5th to Lincoln	324	150
61	Lincoln to Olive Highway	258	120
62	Olive Highway to Orange	184	85
63	Orange to Canyon Highlands	246	114
64	Canyon Highlands to Powerhouse	190	88
65	Powerhouse to Canyon	129	60

TABLE 9-E
DISTANCE TO THE FUTURE L_{DN} CONTOURS

Roadway/ Segment No.	From/To	Distance in feet from Centerline to L _{dn} Contour	
		60 dB	65 dB
Hillcrest Avenue:			
66	Canyon to Kelly Ridge	72	33
Royal Oaks Drive:			
67	Canyon to Kelly Ridge	104	48
Canyon Drive:			
68	Oroville Dam to Olive Highway	104	48
Miners Ranch Road:			
69	Olive Highway to Mount Ida	133	62
Las Plumas Avenue:			
70	Lincoln to Lower Wyandotte	159	74
Ophir Road:			
71	S.R. 70 to Lincoln	188	87
72	Lincoln to Lower Wyandotte	121	56
Mt. Ida Road:			
73	Lower Wyandotte to Foothill	163	75
74	Foothill to La Mirada	183	85
75	La Mirada to Miners Ranch	108	50

TABLE 9-E
DISTANCE TO THE FUTURE L_{DN} CONTOURS

Roadway/ Segment No.	From/To	Distance in feet from Centerline to L _{dn} Contour	
		60 dB	65 dB
Upper Palermo Road:			
76	Ophir to S. Plan Boundary	74	34
Oakvale Avenue:			
77	Olive Highway to Mt. Ida	123	57
78	Mt. Ida to Oroville Bangor Highway	79	37
La Mirada Avenue:			
79	Olive Highway to Wahoo	86	40
80	Wahoo to Mt. Ida	58	27
Baldwin Avenue:			
81	Myers to Washington	45	21
82	Washington to Oroville Quincy Highway	31	14
Wyandotte Avenue:			
83	S.R. 70 to 5th	153	71
84	5th to Lincoln	193	90
85	Lincoln to Myers	104	48
86	Myers to Lower Wyandotte	82	38
87	Lower Wyandotte to Foothill	63	29
Oroville Bangor Highway:			
88	Lower Wyandotte to Foothill	128	60
89	Oakvale to Miners Ranch	96	45

TABLE 9-E
DISTANCE TO THE FUTURE L_{DN} CONTOURS

Roadway/ Segment No.	From/To	Distance in feet from Centerline to L _{dn} Contour	
		60 dB	65 dB
Orange Avenue:			
90	Washington to Oroville Quincy Highway	50	23
91	Oroville Quincy Highway to Oroville Dam	88	41
Oroville Quincy Highway:			
92	Orange to Baldwin	41	19
93	Baldwin to Oroville Dam	63	29
94	Oroville Dam to Foothill	94	43
95	Foothill to Arbol	72	33
96	Glen to Olive Highway	64	30
Olive Highway:			
97	Oroville Dam to Proposed East/West Arterial	332	154
98	Proposed East/West Arterial to Foothill	363	169
99	Foothill to Oakvale	289	134
100	Oakvale to La Mirada	454	211
101	La Mirada to Canyon	355	165
102	Canyon to Kelly Ridge	258	120
Foothill Boulevard:			
103	Oroville Quincy Highway to Olive Highway	69	32
104	Olive Highway to Oroville Bangor Highway	150	70
105	Oroville Bangor Highway to Mt. Ida	210	98
Larkin Road:			
106	Oroville Dam to SW Airport Corner	61	28

Table 9-F compares the L_{dn} values predicted at a distance of 100 feet from the centerlines of major roadways, illustrating the anticipated changes in future traffic noise levels in terms of decibels. Asterisks are used to denote a significant impact at the reference distance of 100 feet from the roadway centerline.

TABLE 9-F
PREDICTED TRAFFIC NOISE LEVELS

Roadway/ Segment No.	From/To	L _{dn} , dB-at 100 feet From Roadway Centerline		
		Existing	Future	Diff.
S.R. 99:				
1	Cottonwood to Oroville Dam	65.3	68.9	3.6*
2	Oroville Dam to S. Plan Boundary	65.4	69.7	4.3*
S.R. 70:				
3	Cottonwood to Nelson	69.7	74.4	4.7*
4	Nelson to Grand	68.1	73.7	5.6*
5	Grand to Montgomery	70.6	75.2	4.6*
6	Montgomery to Oroville Dam	69.4	74.6	5.2*
7	Oroville Dam to Proposed East/West Arterial	69.2	73.2	4.0*
8	Proposed East/West Arterial to S. Plan Boundary	--	74.2	--*
4th Street Access to S.R. 70:				
9	Nelson to Grand	53.6	56.8	3.2
3rd Street Access to S.R. 70:				
10	Nelson to Grand	53.9	57.5	3.6
Feather River:				
11	Montgomery to Mitchell	57.6	60.2	2.6
12	Mitchell to Oroville Dam	57.5	62.1	4.6
13	Oroville Dam to Proposed East/West Arterial	54.7	60.1	5.4*
14	Proposed East/West Arterial to S. Plan Boundary	55.4	63.5	8.1*

**TABLE 9-F
PREDICTED TRAFFIC NOISE LEVELS**

Roadway/ Segment No.	From/To	L _{dn} , dB at 100 feet From Roadway Centerline		
		Existing	Future	Diff.
5th Avenue:				
15	Montgomery to Mitchell	49.6	56.3	6.7*
16	Mitchell to Wyandotte	53.9	59.3	5.4*
17	Wyandotte to Cal-Oak	54.9	58.5	3.6
18	Cal-Oak to S. Plan Boundary	52.7	56.5	3.8
Lincoln Boulevard:				
19	Montgomery to Huntoon	46.8	53.5	6.7*
20	Huntoon to Oroville Dam	50.4	57.8	7.4*
21	Oroville Dam to Wyandotte	61.8	59.3	2.5
22	Wyandotte to Myers	59.6	62.3	2.7
23	Myers to Las Plumas	61.5	64.7	3.2*
24	Las Plumas to Ophir	58.5	60.8	2.3
25	Ophir to S. Plan Boundary	57.4	60.2	2.8
Myers Street:				
26	Montgomery to Baldwin	56.8	57.2	0.4
27	Baldwin to Mitchell	56.4	58.5	2.1
28	Mitchell to Oroville Dam	57.8	60.9	3.1
29	Oroville Dam to Wyandotte	54.4	58.1	3.7
30	Wyandotte to Oroville Bangor	57.5	59.6	2.1
31	Oroville Bangor to Lincoln	52.0	57.2	5.2
Washington Avenue:				
32	Montgomery to Oroville Dam	60.8	62.2	1.4

**TABLE 9-F
PREDICTED TRAFFIC NOISE LEVELS**

Roadway/ Segment No.	From/To	L ₁₀ , dB at 100 feet From Roadway Centerline		
		Existing	Future	Diff.
Long Bar Road:				
33	N. Plan Boundary to Canyon Highlands	54.8	56.4	1.6
34	Canyon Highlands to Orange	58.9	60.2	1.3
Lower Wyandotte:				
35	Olive Highway to Clairmont	60.0	62.0	2.0
36	Clairmont to Las Plumas	59.2	61.7	2.5
37	Las Plumas to Ophir	53.2	59.4	6.2*
Foothill Boulevard:				
38	Oroville Quincy Highway to Olive Highway	52.6	57.5	4.9
39	Olive Highway to E. Plan Boundary	58.5	62.6	4.1
Table Mountain Boulevard:				
40	Center to Nelson	55.6	60.4	4.8
41	Nelson to Grand	59.6	61.9	2.3
42	Grand to Montgomery	61.9	64.2	2.3
Nelson Avenue:				
43	12th to S.R. 70	57.6	61.3	3.7
44	S.R. 70 to Table Mountain	59.3	60.3	1.0

**TABLE 9-F
PREDICTED TRAFFIC NOISE LEVELS**

Roadway/ Segment No.	From/To	L _{eq} dB at 100 feet From Roadway Centerline		
		Existing	Future	Diff.
Grand Avenue:				
45	12th to S.R. 70	60.1	62.9	2.8
46	S.R. 70 to Fogg	57.5	61.4	3.9
47	Fogg to Table Mountain	57.9	60.9	3.0
Montgomery Avenue:				
48	S.R. 70 to Feather River	58.6	59.5	0.9
49	Feather River to 5th	54.8	55.2	0.4
50	5th to Lincoln	55.8	56.2	0.4
51	Lincoln to Myers	55.3	55.0	-0.3
52	Myers to Orange	56.2	57.2	1.0
Mitchell Avenue:				
53	Feather River to 5th	49.1	55.1	6.0*
54	5th to Myers	50.9	57.5	6.6*
55	Myers to Washington	45.7	55.5	9.8*
Oroville Dam Boulevard:				
56	S.R. 99 to 18th	58.3	65.2	6.9*
57	18th to 12th	62.5	68.7	6.2*
58	12th to S.R. 70	65.2	70.1	4.9*
59	S.R. 70 to 5th	65.4	66.5	1.1
60	5th to Lincoln	68.6	67.6	-1.0
61	Lincoln to Olive Highway	66.5	66.2	-0.3
62	Olive Highway to Orange	63.4	64.0	0.6
63	Orange to Canyon Highlands	62.5	65.9	3.4*
64	Canyon Highlands to Powerhouse	62.2	64.2	3.0*
65	Powerhouse to Canyon	57.0	61.7	4.7

**TABLE 9-F
PREDICTED TRAFFIC NOISE LEVELS**

Roadway/ Segment No.	From/To	L _{eq} , dB at 100 feet From Roadway Centerline		
		Existing	Future	Diff.
Hillcrest Avenue:				
66	Canyon to Kelly Ridge	53.2	57.9	4.7
Royal Oaks Drive:				
67	Canyon to Kelly Ridge	57	60.3	3.3
Canyon Drive:				
68	Oroville Dam to Olive Highway	56.5	60.2	3.7
Miners Ranch Road:				
69	Olive Highway to Mount Ida	56.3	61.9	5.6*
Las Plumas Avenue:				
70	Lincoln to Lower Wyandotte	58.6	63	4.4
Ophir Road:				
71	S.R. 70 to Lincoln	58.9	64.1	5.2*
72	Lincoln to Lower Wyandotte	49.0	61.2	12.2*
Mt. Ida Road:				
73	Lower Wyandotte to Foothill	57.7	63.2	5.5*
74	Foothill to La Mirada	48.0	63.9	15.9*
75	La Mirada to Miners Ranch	51.1	60.5	9.4*

TABLE 9-F
PREDICTED TRAFFIC NOISE LEVELS

Roadway/ Segment No.	From/To	L _{dn} , dB at 100 feet From Roadway Centerline		
		Existing	Future	Diff.
Upper Palermo Road:				
76	Ophir to S. Plan Boundary	54.3	58	3.7
Oakvale Avenue:				
77	Olive Highway to Mt. Ida	57.9	61.3	3.4
78	Mt. Ida to Oroville Bangor Highway	57.6	58.5	0.9
La Mirada Avenue:				
79	Olive Highway to Wahoo	52.1	59.0	6.9*
80	Wahoo to Mt. Ida	46.0	56.4	10.4*
Baldwin Avenue:				
81	Myers to Washington	52.3	54.8	2.5
82	Washington to Oroville Quincy Highway	50.3	52.3	2.0
Wyandotte Avenue:				
83	S.R. 70 to 5th	--	62.8	--*
84	5th to Lincoln	--	64.3	--*
85	Lincoln to Myers	57.1	60.3	3.2
86	Myers to Lower Wyandotte	53.2	58.7	5.5*
87	Lower Wyandotte to Foothill	--	57.0	--*
Oroville Bangor Highway:				
88	Lower Wyandotte to Foothill	57.8	61.6	3.8
89	Oakvale to Miners Ranch	58.3	59.7	1.4

**TABLE 9-F
PREDICTED TRAFFIC NOISE LEVELS**

Roadway/ Segment No.	From/To	L _{eq} , dB at 100 feet From Roadway Centerline		
		Existing	Future	Diff.
Orange Avenue:				
90	Washington to Oroville Quincy Highway	51.2	55.5	4.3
91	Oroville Quincy Highway to Oroville Dam	56.8	59.2	2.4
Oroville Quincy Highway:				
92	Orange to Baldwin	51.8	54.3	2.5
93	Baldwin to Oroville Dam	54.7	57.0	3.0
94	Oroville Dam to Foothill	57.4	59.6	2.2
95	Foothill to Arbol	56.4	57.9	1.5
96	Glen to Olive Highway	53.6	57.1	3.5
Olive Highway:				
97	Oroville Dam to Proposed East/West Arterial	65.8	67.8	2.0*
98	Proposed East/West Arterial to Foothill	—	68.4	—*
99	Foothill to Oakvale	67.9	66.9	1.0
100	Oakvale to La Mirada	65.3	69.9	4.6*
101	La Mirada to Canyon	64.7	68.3	3.6*
102	Canyon to Kelly Ridge	62.3	66.2	3.9*
Foothill Boulevard:				
103	Oroville Quincy Highway to Olive Highway	52.6	57.5	4.9
104	Olive Highway to Oroville Bangor Highway	58.5	62.6	4.1
105	Oroville Bangor Highway to Mt. Ida	59.2	64.8	5.6*
Larkin Road:				
106	Oroville Dam to SW Airport Corner	56.7	56.7	0

* = Significant Impact

According to Table 9-F, significant traffic noise impacts may be expected adjacent to fifteen of the major roadways in the City of Oroville as a consequence of increased traffic volumes. The introduction of new roadways will also cause significant changes in ambient noise levels in existing developed and undeveloped areas.

1990 Airport Noise Operation Analysis. Federal Aviation Administration (FAA) and consultant noise level data were used as the basis for Brown-Buntin Associates, Inc., 1990 analysis of aircraft/airport operations and related noise levels, and preparation of noise exposure maps for 1989 (GP Figure 9-C) and for 2010 (GP Figure 9-D). The approximate land area affected by airport noise related to the Oroville Municipal Airport and within the 55 dB CNEL contour is 365 acres. (Also of interest is the area within the 60 dB CNEL contour, which is 128 acres, and the area within the 65 dB CNEL contour, 51 acres.) The area within the 55 dB CNEL contour is currently (1995) uninhabited, and occurs mostly within public property.

The Integrated Noise Model Version 3.9 was used in 1990 to prepare CNEL noise exposure maps for the airport based upon the aircraft noise level and airport operation factors. The model was developed for the FAA and represents the Federally sanctioned and preferred method for analyzing aircraft/airport noise exposure. User inputs to the model included airport altitude and mean temperature, runway configuration (calculated for two separate configurations), aircraft flight track definition, aircraft stage length, aircraft departure and approach profiles, aircraft traffic volume and fleet mix, flight track utilization by aircraft types, and additional inputs representing helicopter operations which occur at Oroville Municipal Airport.

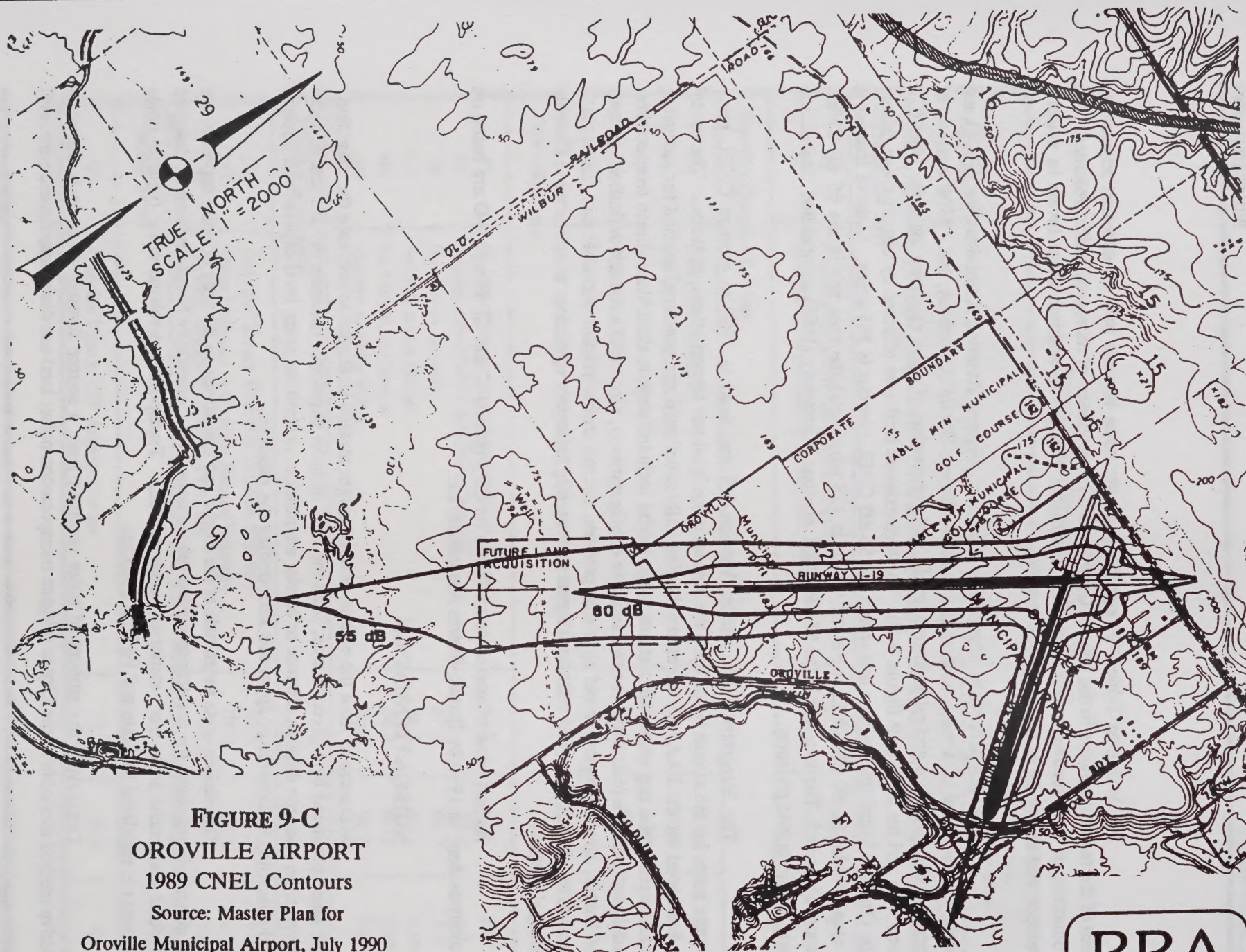
Airport noise related contours shown on GP Figure 9-C and GP Figure 9-D are based on the analysis done in 1990 by Brown-Buntin Associates, Inc.

NOISE ATTENUATION

Measures to limit the effects of noise might include strategies to decrease the magnitude of the noise produced by a given source, limit the time of noise exposure, decrease the amount of noise received from a source through distance or barrier attenuation, or limit the noise level experienced through sound-absorbing enclosures or apparatus surrounding the receiver.

Decreasing noise magnitude at the source and limitations on the time of noise exposure are most effectively regulated for non-transportation-related noise by a Community Noise Ordinance, designed to protect residential areas from stationary noise sources. Transportation-related noise (vehicle noise emissions) is regulated by State and Federal agencies.

Decreasing the amount of noise received from a source through distance is the most effective method available to the City to mitigate transportation noise; land use designation at a macro level



BBA

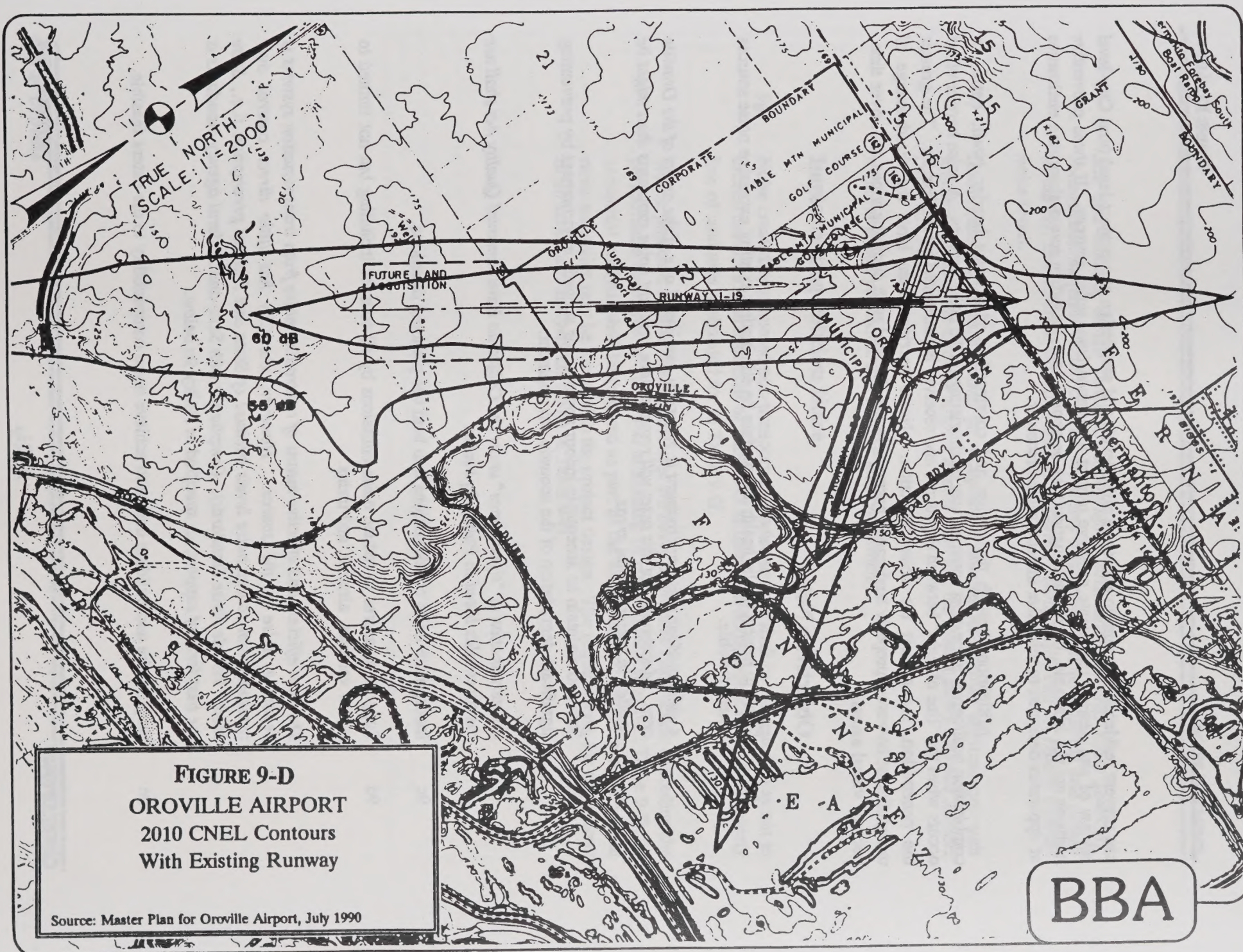


FIGURE 9-D
OROVILLE AIRPORT
2010 CNEL Contours
With Existing Runway

Source: Master Plan for Oroville Airport, July 1990

BBA

can prevent residents' exposure to excessive noise levels and site design at a project-level (and City-level review of site design) can locate sensitive uses at a distance from noise sources. If these preventive methods are not available, barrier attenuation may be appropriate, including sound-absorbing enclosures or apparatus designed to minimize impacts on the receiver.

Mitigation through the design and construction of a noise barrier (wall, berm, or combination wall/berm) is the most common way of alleviating traffic noise impacts. A noise barrier effect occurs when the "line of sight" between the source and receiver is penetrated by the barrier. The greater the penetration, the greater the noise reduction. Noise barriers often have the disadvantage of unsightliness; however, properly landscaped berms or walls shielded with climbing vines can, over time, become visual assets.

Objectives: Noise

- 9a Strive to protect public health and welfare by eliminating existing excessive noise sources where feasible.

A quiet outdoor noise environment is generally considered one of the assets of the Oroville area. Maintenance of this asset will require more stringent noise standards than might be applied in noisier urban areas.

- 9b Strive to maintain an acceptable indoor and outdoor acoustic environment by preventing significant degradation of the acoustic environment.

A determination of "significance" under the California Environmental Quality Act shall use the thresholds listed in Policy 9q below.

- 9c Incorporate noise considerations into land use planning decisions.

- 9d Support measures to reduce noise emissions by all sources including but not limited to motor vehicles, aircraft, and trains.

The most efficient and effective means of controlling noise from transportation systems is reducing noise at the source. However, the City has little direct control over transportation source noise levels because of State and Federal preemption (i.e., State Motor Vehicle Noise Standards). Compliance with State and Federal agency standards is the best form of support, as specified in Policy 9o below.

- 9e Require site and building design to achieve noise compatibility to the extent feasible.

Site and building design (setbacks, topography, orientation towards noise sources), construction materials (solid core doors, sound insulation, weatherstripping and sealed windows), and external shielding (barriers, berms, sound walls) can all reduce interior noise levels.

- 9f Coordinate efforts to maintain an acceptable Planning Area noise environment with implementation of the *Oroville Airport Master Plan* and the *Butte County Oroville Airport Land Use Plan*.

Airport-related policies are in the Circulation Element.

Implementing Policies: Noise

- 9g Noise created by proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 9-G as measured immediately within the property line of land uses designated for in Table 9-G.

Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 9-G at existing or planned uses shown in Table 9-G, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design. The requirements for the content of an acoustical analysis are given in Table 9-H.

TABLE 9-G
NOISE LEVEL PERFORMANCE STANDARDS FOR NEW PROJECTS
AFFECTED BY OR INCLUDING NON-TRANSPORTATION SOURCES

Land Use	Noise Level Descriptor	Exterior Noise Levels		Interior Noise Levels	
		Daytime (7 am to 10 pm)	Nighttime (10 pm to 7 am)	Daytime (7 am to 10 pm)	Nighttime (10 pm to 7 am)
Residential	Hourly L_{eq} , dBA	50	45	45	35
	Maximum Level, dBA	70	65	—	—
Transient Lodging	Hourly L_{eq} , dBA	—	—	45	35
Hospitals, Nursing Homes	Hourly L_{eq} , dBA	—	—	45	35
Theaters, Auditoriums, Music Halls	Hourly L_{eq} , dBA	—	—	35	35
Churches, Meeting Halls	Hourly L_{eq} , dBA	—	—	40	40
Office Buildings	Hourly L_{eq} , dBA	—	—	45	45
Schools, Libraries, Museums	Hourly L_{eq} , dBA	—	—	45	45
Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).					

Note: For the purposes of the Noise Element, transportation noise sources are defined as traffic on public roadways, railroad line operations and aircraft in flight. Non-transportation noise sources may include industrial operations, outdoor recreation facilities, HVAC units, loading docks, construction equipment, etc. Refer to the Noise Element technical background document for further examples.

**TABLE 9-H
REQUIREMENTS FOR AN ACOUSTICAL ANALYSIS**

An acoustical analysis prepared pursuant to the Noise Element shall:

- A. Be the financial responsibility of the applicant.
- B. Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
- C. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.
- D. Estimate existing and projected cumulative (20 years) noise levels in terms of the metrics used in Table 9-I, and compare those values to the adopted policies of the Noise Element.
- E. Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element, giving preference to proper site planning and design over mitigation measures which require the construction of noise barriers or structural modifications to buildings which may be considered to contain noise-sensitive land uses. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance.
- F. Estimate noise exposure after the prescribed mitigation measures have been implemented.
- G. Describe a post-project assessment program which could be used to evaluate the effectiveness of the proposed mitigation measures.

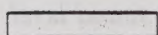
- 9h The feasibility of proposed projects with respect to existing and future transportation noise levels shall be evaluated by comparison to GP Figure 9-E.
 - 9i New development will not be permitted in areas exposed to existing or projected levels of noise from transportation noise sources which exceed the levels specified in Table 9-I, unless the project design includes effective mitigation measures to reduce noise in outdoor activity areas and interior spaces to the levels specified in Table 9-J.
- Where the land uses contained in Table 9-I are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 9-I, an acoustical analysis shall be required and appropriate mitigation shall be included in the project design.
- 9j Noise created by new transportation noise sources, including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in Table 9-I at outdoor activity areas or interior spaces of the existing uses specified in Table 9-I.
 - 9k Develop and adopt an appropriate and consistent Community Noise Ordinance to control noise impacts, to ensure that residents are not exposed to excessive noise levels from stationary and mobile sources, and to educate the public regarding noise issues.

A Community Noise Ordinance can establish noise limits, typical of a quiet residential area, that cannot be exceeded at the property line of the noise-creating use. The types of noise sources to be controlled include amplified sound, street sales, animals, construction and demolition, vibration, powered model vehicles, emergency signaling devices, power tools, air conditioning, and vehicles on private property. The Ordinance can apply to both permanent and temporary noise sources, and standards can adjust to reflect increased sensitivity to noise during evening and night hours.

FIGURE 9-E
FEASIBILITY OF DEVELOPMENTS WITH RESPECT TO NOISE

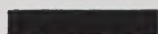
LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE L _{dn} or CNEL, dB					
	55	60	65	70	75	80
Residential, Theaters, Auditoriums, Music Halls, Meeting Halls, Churches						
Transient Lodging - Motels, Hotels						
Schools, Libraries, Museums, Hospitals, Nursing Homes, Child Care						
Playgrounds, Neighborhood Parks						
Office Buildings, Retail Commercial						
Industrial, Manufacturing, Utilities						
Golf Courses, Outdoor Spectator Sports						

INTERPRETATION



FEASIBLE

Specified land use is satisfactory. No noise mitigation measures are required.



PROBABLY FEASIBLE

Use should be permitted only after careful study and inclusion of protective measures as needed to satisfy the policies of the Noise Element.



USUALLY NOT FEASIBLE

Development is usually not feasible in accordance with the goals of the Noise Element.

TABLE 9-I
MAXIMUM ALLOWABLE NOISE EXPOSURE
TRANSPORTATION NOISE SOURCES

Land Use	Outdoor Activity Areas ¹ L _{dn} /CNEL, dB	Interior Spaces	
		L _{dn} /CNEL, dB	L _{eq} , dB ²
Residential	60 ³	45	--
Transient Lodging	60 ³	45	--
Hospitals, Nursing Homes	60 ³	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	60 ³	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

¹ Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.

² As determined for a typical worst-case hour during periods of use.

³ Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed, provided that practical exterior noise level reduction measures have been implemented and that interior noise levels are in compliance with this table.

- 9l Amend the Zoning Ordinance to include noise standards applicable to Oroville and geared to particular zoning districts.

Performance standards may be specified that define a maximum permissible sound level authorized for a given property use, thus tying acceptable noise levels to particular zones.

- 9m Continue to limit hours for all construction or demolition work where site-related noise is audible at sensitive land uses beyond the site boundary; specify permitted construction and or demolition hours in the Community Noise Ordinance.

Tentative maps are currently (1995) conditioned upon a guarantee of no work between 9 p.m. and 7 a.m.

- 9n Where necessary, use noise barriers to attenuate noise to acceptable levels; require that barriers are landscaped to reduce negative visual impacts on the community.
- 9o Assist in enforcing compliance with noise emissions standards for all types of vehicles, established by the California Vehicle Code and by Federal regulations, through coordination with the Oroville Police Department, Butte County Sheriff's Department, and the California Highway Patrol.
- 9p Maintain day and nighttime truck routes that minimize the number of residents exposed to truck noise.
- 9q In making a determination of significant impact pursuant to the California Environmental Quality Act (CEQA), the following thresholds shall be used:
 - The significance of noise impacts may be determined by comparison of overall noise levels (including contributions from the project) to applicable Federal, State or local noise level standards, and by the expected change in ambient noise levels which will occur as a result of the project.
 - The overall noise level may be considered significant if the project results in noise levels which exceed the noise standards in Tables 9-G or 9-I by 0.5 dB or more.
 - Expected public reactions to changes in ambient noise levels have been reported by Egan and others, quantified by metrics that define short-term exposure (e.g., hourly L_{eq} , L_{max} and L_n). These metrics are usually used to describe noise impacts due to industrial operations, machinery and other sources that are not associated with transportation. An increase of at least 3 dB is usually required before most people will perceive a change in noise levels, and an increase of 5 dB is required before the change will be clearly noticeable. For the City of Oroville, a minimally perceptible increase of 3 dB represents a significant increase in short-term ambient noise levels.

Table 9-J is based upon recommendations made in August 1992 by the Federal Interagency Committee on Noise (FICON) to provide guidance in the assessment of changes in ambient noise levels resulting from aircraft operations. Their recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, it

is assumed here that they are applicable to all transportation noise sources, in terms of the cumulative noise exposure metrics L_{dn} or CNEL. These metrics define noise exposure in terms of average noise exposure during a 24-hour period with penalties added to noise that occurs during the nighttime or evening. L_{dn} or CNEL are usually defined in terms of an average annual day, and are therefore quite different than the short-term noise level descriptors described above.

- 9r Continue to restrict development within the 55 dB CNEL noise contour around the Oroville Municipal Airport.

This policy is a restatement of Policy 5.50d in the Oroville Municipal Airport section of the Circulation Element.

**TABLE 9-J
SIGNIFICANCE OF CHANGES
IN CUMULATIVE NOISE EXPOSURE**

Ambient Noise Level Without Project (L_{dn} or CNEL)	Significant Impact
< 60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
> 65 dB	+1.5 dB or more
Source: Federal Interagency Committee on Noise (FICON)	

ENDNOTES

1. The use of the abbreviation "dB" for "decibel" in this text implies that the noise level has been "A-weighted," and is thus equivalent to dB(A).

APPENDIX

GLOSSARY OF TERMS AND ABBREVIATIONS

Acoustical Engineer. An engineer specializing in the measurement and physical properties of sound. In environmental review, the acoustical engineer measures noise impacts of proposed projects and designs measures to reduce those impacts.

Acre-Foot. The volume of water that would cover one acre to a depth of one foot. An acre-foot is about the amount of water used each year in and around the home by two average California families.

Acre, Net. The portion of a site that can actually be built upon. Not included in the net acreage of a site are public or private road rights-of-way, public open space, and flood ways.

ADT. Average daily traffic, a two-directional 24-hour vehicle traffic volume.

Affordable Housing. Dwelling units for which the housing payment is not more than 30 percent of household gross income for a specified income group.

Airport Land Use Commission (ALUC). The county-level body, established pursuant to the State ALUC law, responsible for developing plans for achieving land use compatibility between airports and their environs.

Alluvium. A general term for clay, silt, sand, gravel, or similar unconsolidated detrital material deposited during comparatively recent geologic time by a stream or other body of running water as a sorted or semi-sorted sediment in the bed of the stream or on its flood plain or delta, or as a cone or fan at the base of a mountain slope.

AQMA. Sacramento Area Air Quality Maintenance Area.

Army Corps of Engineers. A Federal agency responsible for the design and implementation of publicly-supported engineering projects. Any construction activity that involves filling a watercourse, pond, lake (natural or man-made), or wetlands (including seasonal wetlands and vernal pools), may require an Army Corps permit.

Artificial Groundwater Recharge. The process whereby water in an aquifer (a waterbearing stratum of permeable rock, sand, or gravel) is artificially replenished.

ASBI. Areas of special biological importance, as defined by Butte County. ASBI provide a critical link for certain wildlife populations, contain ecological communities that offer outstanding examples of natural systems, are limited in extent either naturally or as a result of human-caused impacts, or provide habitat for rare, threatened, or endangered species.

Base Flood Elevation. The highest elevation, expressed in feet above sea level, of the level of flood waters occurring in the regulatory base flood. The base flood elevation represents the worst flooding experience in a community or an area.

BCAG. Butte County Association of Governments.

BCFD. Butte County Fire Department.

BCT. Butte County Transit.

Bedrock. The solid rock underlying unconsolidated surface materials.

Bike Lane. A corridor expressly reserved by markings for bicycles, existing on a street or roadway in addition to any lanes for use by motorized vehicles (Class II Bikeway).

Bike Path. A paved route not on a street or roadway, expressly reserved for bicycles. Bike paths may parallel roads but typically are separated from them by landscaping (Class I Bikeway).

Buildout. That level of urban development characterized by full occupancy of all developable sites in accordance with the General Plan; the maximum level of development envisioned by the City's General Plan. Buildout does not assume that each parcel is developed to include all floor area or housing units possible under zoning regulations.

CAI. California Archaeological Inventory.

Caltrans. California Department of Transportation.

Capital Improvement Program (CIP). The multi-year scheduling of public physical improvements based on studies of fiscal resources available and the choice of specific improvements to be constructed. Oroville's CIP is for a five-year period.

CARB. California Air Resources Board.

Carbon Monoxide (CO). An odorless, colorless gas formed by the incomplete combustion of fuels.

CDBG. Federal Community Development Block Grant.

CDFFP. California Department of Forestry and Fire Protection.

CEQA. California Environmental Quality Act, 1979.

City. The City of Oroville.

Class I Bikeway. See Bike Path.

Class I Disposal Site. Sites at which complete protection for the quality of groundwaters, surface waters, public health, and wildlife resources is provided for all time from wastes deposited therein. These sites are designated as capable of accepting for disposal Group 1, 2, and 3 wastes.

Class II Bikeway. See Bike Lane.

Class II Disposal Site. Sites at which protection to groundwaters, surface waters, public health, and wildlife resources is provided from Group 2 and 3 wastes.

Class III Disposal Site. Sites at which protection to water quality is provided from Group 3 wastes by location, construction, and operation which prevent erosion of deposited material.

CMP. Congestion Management Program, Butte County.

CNDDb. California Natural Diversity Data Base, Department of Fish and Game.

Community Noise Equivalent Level (CNEL). A 24-hour energy equivalent level derived from a variety of single-noise events, with weighing factors of 5 and 10 dB applied to the evening (7:00 to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) periods, respectively, to allow for the greater sensitivity to noise during those hours. An alternative measure is day-night average sound level (L_{dn}), the A-weighted average sound level for a given area (measured in decibels) during a 24-hour period with a 10 dB weighing applied to nighttime sound levels. The L_{dn} is approximately numerically equal to the CNEL for most environmental settings.

Conservation. The management of natural resources to prevent waste, destruction, or neglect.

Critical Facility. Facilities having a vital role in a potential emergency, the failure of which might prove catastrophic.

CTC. California Transportation Commission.

Culvert. A drain, ditch or conduit not incorporated in a closed system that carries drainage water under a driveway, roadway, railroad, pedestrian walk or public way. Culverts are often built to channelize streams and as part of flood control systems.

Curb Cut. The opening along the curb line at which point vehicles or other wheeled forms of transportation may enter or leave the roadway. Curb cuts are essential at street corners for wheelchair users.

CWS. California Water Service.

Cycle Length. The amount of time between the beginning of one green light and the beginning of the next green light.

Decibel "A-Weighted" (dBA). The scale for measuring sound in decibels that weights or reduces the effects of low and high frequencies in order to simulate human hearing. See also Decibel.

Decibel (dB). A unit used to express the relative intensity of a sound as it is heard by the human ear. The decibel measuring scale is logarithmic. Zero (0 dB) on the scale is the lowest sound level that a normal ear can detect under very quiet ("laboratory") conditions and is referred to as the "threshold" of human hearing. On the logarithmic scale, 10 decibels are 10 times more intense, 20 decibels are 100 times more intense, and 30 decibels are 1,000 times more intense than 1 decibel. See also Decibel "A-Weighted."

DEIR. Draft Environmental Impact Report.

Density Bonus. An increase in allowable density above base density granted in exchange for provision of affordable or senior housing.

Density, Net. The number of dwelling units per acre of developable residential land designated on the General Plan Diagram, exclusive of public and private streets, drainage, power-transmission-line easements, or other public and semipublic uses.

Design Review. The process whereby projects are reviewed for compliance with established design guidelines.

Development Fees. Direct charges or dedications collected on a one-time basis for a service provided or as a condition of approval being granted by the local government.

DFG. Department of Fish and Game, State of California.

DPR. Department of Parks and Recreation, State of California.

Dwelling Unit (du). A building or portion of a building containing one or more rooms, designed for or used by one family for living or sleeping purposes, and having a separate bathroom and only one kitchen or kitchenette. See Housing Unit.

DWR. Department of Water Resources, State of California.

Ecotone. A transition area between two adjacent ecological communities usually exhibiting competition between organisms common to both; often a rich biological area.

Effluent. A liquid discharged as waste, such as the outflow from a sewage treatment facility or storm sewer.

EIR (Environmental Impact Report). A report on the effect of a proposed development proposal or other major action which would significantly affect the environment. The report consists of an inventory of existing environmental conditions, projected impacts of development, and mitigation for significant adverse impacts. A general plan EIR is necessarily more general than a site-specific EIR.

EMFD. El Medio Fire District.

Endangered Species, California. A native species or sub-species of a bird, mammal, fish, amphibian, reptile, or plant, which is in serious danger of becoming extinct throughout all or a significant portion of its range, due to one or more factors, including loss in habitat, change in habitat, over-exploitation, predation, competition, or disease. The status is determined by the State Department of Fish and Game together with the State Fish and Game Commission.

Endangered Species, Federal. A species which is in danger of extinction throughout all or a significant portion of its range, other than the species of the Class Insecta determined to constitute a pest whose protection under the provisions of the 1973 Endangered Species Act, as amended, would present an overwhelming and overriding risk to humans. The status is determined by the U.S. Fish and Wildlife Service and the Department of the Interior.

EPA. U.S. Environmental Protection Agency.

Epicenter. That point on the Earth's surface which is directly above the focus of an earthquake.

ERC. Extended runway centerline.

Erosion. The process by which soil and rock are detached and moved by running water, wind, ice, and gravity.

Estuarine Environment. Includes marshlands, mudflats, salt production lands, and open water.

FAR. Federal Aviation Regulations.

FAR. Floor Area Ratio. The ratio between gross floor area of structures on a site and gross site area. Thus, a two-story building covering 50 percent of its site would have a FAR of 1.0.

Fault. A surface or zone of rock fracture along which there has been displacement, from a few centimeters to a few kilometers in scale.

Federal Candidate Species, Category 1 (Candidate 1). Species for which the U.S. Fish and Wildlife Service has sufficient biological information to support a proposal to list as Endangered or Threatened.

Federal Candidate Species, Category 2 (Candidate 2). Species for which existing information indicates that these species may warrant listing, but for which substantial biological information to support a proposed rule is lacking.

Federal Flood Insurance. Affordable flood insurance offered by the Federal government to property owners whose communities participate in the National Flood Insurance Program. Oroville is a participant.

FEIR. Final Environmental Impact Report.

FEMA. Federal Emergency Management Agency.

FIRM. Flood Insurance Rate Map.

500-year flood. A flood which has a 0.2 chance of occurrence in any given year.

Floor Area, Gross. The total horizontal area in square feet of all floors within the exterior walls of a building, but not including the area of unroofed inner courts or shaft enclosures.

FMMP. State Department of Conservation Farmland Mapping and Monitoring Program.

FRRPD. Feather River Recreation and Park District.

Greenhouse Effect. The gradual warming of the Earth's atmosphere attributed to the accumulation of gases caused by industrial and agricultural activities. Associated phenomena include the melting of the polar ice caps and rising sea levels.

Group 1 Wastes. Consist of or contain toxic substances and substances which could significantly impair the quality of usable waters. Examples are acids, alkalies, pesticides, and chemical toilet wastes.

Group 2 Wastes. Consist of or contain chemically or biologically decomposable material, which does not include toxic substances nor those capable of significantly impairing the quality of usable waters. Examples are garbage, rubbish, street refuse, dead animals, and agricultural crop residues.

Group 3 Wastes. Consist entirely of non-water soluble, non-decomposable inert solids. Examples are dirt, rock, concrete, and asphalt.

Habitat. The natural environment of a plant or animal.

Hardscape. Rigid portions of the urban landscape, including the surfaces of streets and sidewalks, structures, and underground utilities.

Hazardous Waste. Waste which requires special handling to avoid illness or injury to persons or damage to property. Includes, but is not limited to, inorganic mineral acids of sulfur, fluorine, chlorine, nitrogen, chromium, phosphorous, selenium and arsenic and their common salts; lead, nickel, and mercury and their inorganic salts or metallo-organic derivatives; coal, tar acids such as phenol and cresols and their salts; and all radioactive materials.

HAZMAT Team. Hazardous materials response team.

HHWE. Household Hazardous Waste Element, as required by AB 939.

HHW. Household hazardous waste.

High Occupancy Vehicle Lanes (HOV). Traffic lanes that are permanently or periodically restricted by law to vehicles with two, three, or more occupants.

Household. Person or persons living in one dwelling unit.

Housing Payment. For ownership housing, this is defined as the mortgage payment, property taxes, and insurance and utilities. For rental housing this is defined as rent and utilities.

Housing Unit, Multifamily. Units with two or more housing units in one structure.

Housing Unit, Single-Family Attached. Single family units that are attached to other units with adjoining walls extending from ground to roof that separate it from other adjoining structures and form a property line. Each unit has its own heating system.

Housing Unit, Single-Family Detached. Single family units that are detached from any other house with open space on all four sides.

Impervious Surface. Any material which reduces or prevents absorption of water into land.

Income, Above-Moderate. A household whose income exceeds 120 percent of the county median.

Income, Low. A household whose income does not exceed 80 percent of the county median.

Income, Median. The county-wide median income for a four-person household, as defined by the United States Department of Housing and Urban Development and the California Department of Housing and Community Development.

Income, Moderate. A household whose income is between 81 and 120 percent of the median family income for the county.

Income, Very-Low. A household whose income does not exceed 50 percent of the median family income for the county.

Infill. The development of new housing or other buildings on scattered vacant lots in a built-up area or on new building parcels created by permitted lot splits.

Inversion. Temperature inversions limit the amount of vertical mixing of air and thus trap pollutants in the lower atmosphere where people breathe. Inversions are characterized by a layer of warmer air above a layer of cooler air, a reversal of the normal decline in temperature with increasing altitude.

ISO. Insurance Service Office.

Jobs-Housing Balance. A ratio used to describe the adequacy of the housing supply within a defined area to meet the needs of persons working within the same area. Jobs-housing balance as used in the General Plan is the ratio of jobs to employed residents within the Oroville Planning Area.

Key Wildlife Area. As defined by Butte County, Key Wildlife Areas provide essential habitat components of food, cover, water, or areas for breeding and nesting/rearing of young, and may also represent the known habitat of a species of limited abundance or restricted distribution or occurrence.

LAFCO. Local Agency Formation Commission of Butte County.

Landslide. The downslope movement of soil and rock.

L_{dn}. See CNEL.

Leachate. A solution obtained by leaching, e.g., water that has percolated through soil containing soluble substances and that contains certain amounts of substances in solution.

Liquefaction. A sudden large decrease in the shearing resistance of a cohesionless soil, caused by a collapse of the structure by shock or strain, and associated with a sudden but temporary increase of the pore fluid pressure.

LOAPUD. Lake Oroville Area Public Utility District.

LOS. Traffic Level of Service calculated on the basis of a volume-to-capacity ratio of an intersection.

LRA. Local Responsibility Area.

MAP. Million annual passengers.

MGD. Millions of gallons per day.

Mitigation. A specific action taken to reduce environmental impacts. Mitigation measures are required as a component of an environmental impact report (EIR) if significant impacts are identified.

Mobile Home. A structure, transportable in one or more sections which is built on a permanent chassis and designed to be used as a dwelling unit, with or without a permanent foundation when connected to the required utilities.

Net Acre. See Acre, Net

Nitrogen Dioxide (NO₂). A reddish brown gas that is a byproduct of the combustion process and is a key to the ozone production process.

Noise Contour(s). Isolines (a line on a map or chart along which there is a constant value) representing noise, measured in decibels. See also Community Noise Equivalent Level.

Non-point Source. A pollutant source introduced from dispersed points and lacking a single, identifiable origin. Examples include automobile emissions or urban run-off.

NPSC Program. Non-point source control program.

NRPA. National Recreation and Park Association.

OESD. Oroville Elementary School District.

OFD. Oroville Fire Department.

100-year Flood. That flood event which has a one percent chance of occurrence in any one year.

OPD. Oroville Police Department.

Open Space. Any parcel or area of land or water which is essentially unimproved and devoted to an open-space use as defined in the General Plan or designated on a local, regional, or State open-space plan as one of the four types of open space defined in State Planning Law.

Oroville Area Transit System. OATS provides fixed-route bus service to the general public along a 17.5 mile long route.

OSHA. California Occupational Safety and Health Administration.

OSWDC. Oroville Solid Waste Disposal Company.

OUHSD. Oroville Union High School District.

OWID. Oroville-Wyandotte Irrigation District.

Oxidant. The production of photochemical reactions in the atmosphere between reactive organic gases and oxides of nitrogen.

Ozone. An oxidant, O₃, that makes up the largest single portion of smog.

Parcel. A lot or tract of land.

Particulate Matter. Minute, separate airborne solid or liquid particles including smoke, dust, aerosols, metallic oxides, and pollen.

Peak Hour Traffic. The number of vehicles passing over a designated section of a street during the busiest one-hour period during a 24-hour period.

Planning Area. The City, and the land outside its boundaries that bear relation to its planning, as shown on GP Figure 1.80-A.

Point Source. A source of pollutants which may be traced to a discrete point of emission.

Population Holding Capacity. The population that would result if all vacant land designated for residential use within the Planning Area were built at the average density for the designated General Plan density category and the average number of persons per housing unit in the Planning Area were 2.45 (estimated from the 1990 U.S. Census).

Pore Pressure. Seismic shaking raises the pore water pressure of soils repeatedly so that sand grains are momentarily forced apart, creating the opportunity for liquefaction or other secondary seismic hazards.

PUSD. Palermo Union School District.

Quadrangle. Four-sided area, bounded by parallels of latitude and meridians of longitude, used as an area unit in mapping.

RDA. Oroville Redevelopment Agency.

Reclaimed Wastewater. Treated sewage or excess irrigation water with chlorine or other chemical disinfectants added.

Response Time. The amount of time for an emergency services response, measured from the time of the distress call until arrival on the scene.

Retention Area. A pond, pool, lagoon, or basin used for the storage of water runoff.

Right-of-Way. A strip of land acquired by reservation, dedication, forced dedication, prescription or condemnation, and intended to be occupied or actually occupied by a road, crosswalk, railroad, electric transmission lines, oil or gas pipeline, water line, sanitary storm sewer or other similar use.

Riparian. Pertaining to the bank of a natural course of water, whether seasonal or annual. Riparian habitat is defined by the surrounding vegetation or presence of known wildlife movement pathways; it borders or surrounds a waterway.

RWQCB. Regional Water Quality Control Board.

Sand Boils. Sand and water ejected to the surface as a result of liquefaction at shallow depth; a conical or ridge-shaped sediment deposit is evidence of this occurrence.

SCOR. Sewerage Commission Oroville Region.

SCS. Soil Conservation Service, U.S. Department of Agriculture.

Seiche. Oscillation of the surface of an enclosed body of water owing to earthquake shaking.

Sensitive Receptors. Members of the population who are most sensitive to air quality including children, the elderly, the acutely ill, and the chronically ill. The term "sensitive receptors" can also refer to the land use categories where these people live or spend a significant amount of time. Such areas include residences, schools, playgrounds, child care centers, hospitals, retirement homes, and convalescent homes.

Siltation. The process of silt deposition. Silt is a loose sedimentary material composed of finely divided particles of soil or rock, often carried in cloudy suspension in water.

SMARA. California Surface Mining and Reclamation Act of 1975.

Solid Waste. Unwanted or discarded material, including garbage, with insufficient liquid content to be free flowing.

SOV. Single-occupant vehicle.

Specific Plan. A detailed plan that includes the text and maps or diagrams generally specifying the following for a portion of the area covered by the General Plan:

1. Land use;
2. Distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities;
3. Standards and criteria by which development will proceed; and
4. A program of implementation measures including regulations, programs, public-works projects, and financing measures.

Sphere of Influence (SOI). The ultimate service area of the City of Oroville as established by Butte County LAFCO.

SRA. State Recreation Area.

SRA. State Responsibility Area.

SRRE. Source Reduction and Recycling Element, as required by AB 939.

SSZ. Special Studies Zone, as identified in California's Alquist-Priolo Special Studies Zone Act, 1973.

STIP. State Transportation Improvement Plan.

Subdivision. The division of a lot, tract, or parcel of land into two or more lots, tracts, parcels, or other divisions of land for sale, development, or lease.

Subsidence. The gradual sinking of land as a result of natural or man-made causes.

Substrate; Substratum. The material of which something is made and from which it derives its special qualities.

Threatened Species, California. A native species or sub-species of a bird, mammal, fish, amphibian, reptile, or plant that, although not currently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of special protection and management efforts required by Chapter 1.5 of the State Department of Fish and Game Code.

Threatened Species, Federal. A species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

TID. Thermalito Irrigation District.

Trip-Generation Rate. The number of vehicle trips per acre, per 1,000 square feet of floor area, per housing unit or other unit of measure during a stated period. Measured trip-generation rates are used to project the impact of development on the traffic circulation system and as a basis for regulating the intensity of development.

Trip, Person. A trip made by an individual.

Trip. A one-way journey that proceeds from one origin to one destination.

TSM (Transportation Systems Management). Measures designed to reduce peak-period auto traffic by making a more efficient use of existing resources, and emphasizing transit, ridesharing, and non-automobile alternatives.

Tsunami. Large wave action induced by seismic shaking.

TUSD. Thermalito Union School District.

Unique Natural Area. As defined by Butte County, Unique Natural Areas are remarkable because of their limited nature or the unusual conditions required for their existence, because they are outstanding examples of natural systems, or because they are especially aesthetic.

USGS Quadrangles. A U.S. Geological Survey-produced map showing natural and cultural features for an area extending across 15 minutes of longitude and 7.5 minutes of latitude.

USGS. United States Geological Survey.

Vehicle Trip. A trip made by a vehicle (may equal one or more person-trips).

Waste Stream. All solid, semi-solid and liquid wastes including garbage, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semisolid wastes, and other paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semisolid wastes, and other discarded solid and semisolid wastes.

Waterway. A natural or man-made waterway that can support its own environment of vegetation, fowl, fish, and reptiles, and appears natural.

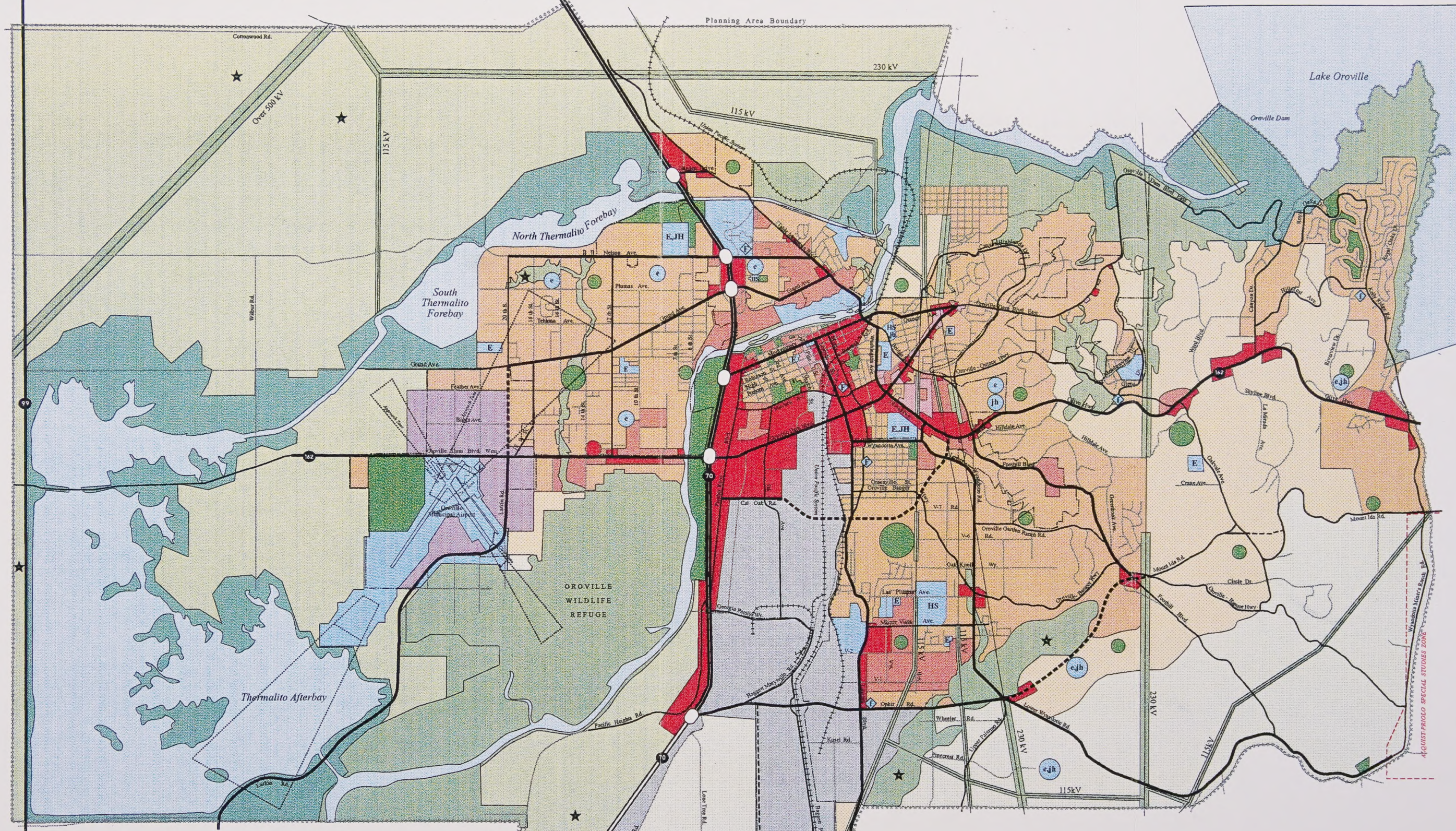
Wetlands. Includes the environments of the Feather River, ephemeral and year-round streams and creeks, Lake Oroville, the Forebay and Afterbay, vernal pools, and all types of marshland.

Williamson Act. Known formally as the *California Land Conservation Act of 1965*, it was designed as an incentive to retain prime agricultural land and open space in agricultural use, thereby slowing its conversion to urban and suburban development. The program entails a ten-year contract between the City or County and an owner of land, whereby the land is taxed on the basis of its agricultural use rather than its market value. The land becomes subject to certain enforceable restrictions, and certain conditions need to be met prior to approval of an agreement.

Xeric. Vegetation requiring only a small amount of moisture.

Zoning District. A specifically delineated area on a zoning map within which regulations and requirements uniformly govern the use, placement, spacing, and size of buildings, open spaces, and other facilities.

Zoning Ordinance. The City ordinance which divides Oroville into districts and establishes regulations governing the use, placement, spacing, and size of buildings, open spaces, and other facilities.



LAND USE CLASSIFICATIONS

	Very Low Density Residential (5 acre minimum)		Retail & Business Services		Parks
	Low Density Residential (5 to 1/2 acre minimum)		Office		Environmental Conservation/Safety
	Medium Density Residential (2 to 6 units per acre)		Airport Business Park		State Water Project Lands
	High Density Residential (6 to 20 units per acre)		Industrial		Resource Management
			Public		Water

General Location of Proposed Facility

Elementary School E = Existing e = future
Junior High J H = Existing jh = future
High School H S = Existing hs = future
Fire Station F = Existing f = future

★ Vernal Pools in Vicinity.

- City of Oroville Corporate Limit
- Transmission Line
- CIRCULATION SYSTEM**
- Freeway
- Highway
- Arterial (dashed where proposed)
- Collector (dashed where proposed)
- Local
- Interchange

Scale

0 2000' 4000' 1 Mile

Oroville Planning Area
GENERAL PLAN DIAGRAM

Adopted: October 1995

BLAYNEY
DYETT
GREENBERG Urban and Regional Planners

WILLDAN ASSOCIATES
ENGINEERS & PLANNERS

PMC PACIFIC MUNICIPAL CONSULTANTS



QUALITY PARK
10 x 15

U.C. BERKELEY LIBRARIES



C101745747

